

## CONTROLLING INTERNAL PARASITES IN LIVESTOCK

Livestock and dairy owners are all painfully aware that this year's feed prices have been at an all-time high. Being caught in the currents of brutal economics, several ranchers have been forced to sell cattle and sheep that would normally be kept for breeding stock. Feedlot operators are also being cautious about filling their corrals with feeder animals. No one in the livestock or dairy business is making much money this season. As such, this is one of those years when successful operators will need to get maximum growth and production from every ton of feed that is fed. The use of commercial products to control internal and external parasites has become a priority in our current economic environment.

Most cattle and sheep harbor some internal and external parasites, though there is typically a wide variation in the parasite burden of different herds. Stocking rates, pasture rotations, pasture drainage, use of clean feed bunks, co-mingling of animals, and presence (or lack thereof) of a deworming program will impact parasite infestation rates. Control of parasitism in livestock is dependent upon a combination of good management and the appropriate use of anthelmintics. When an anthelmintic is used we recommend treatment of all animals in the herd.

Liver flukes, tapeworms and roundworms are the most common internal parasites in Utah livestock. Lice, mange mites, horn and heel flies and sheep keds are common external parasites. Analyses of fecal samples for roundworm eggs and counting of eggs per gram of feces are frequently used to estimate the level of parasitism in infected livestock. There is, however, great variation in the number of roundworm eggs that are shed in the feces at any given time. More visual symptoms include livestock that appear dull, listless, weak and slow in gaining weight. A 600 pound calf, for example, may lose 1 ½ pints of blood daily because of blood-sucking roundworms. Loss of appetite, general unthriftiness, rough hair coats, watery feces, and diarrhea with blood are additional symptoms. Heavily infested animals may die without noticeable symptoms.

Several roundworms infect livestock. One species of roundworm resides in the lungs (lungworm) and the remaining species of roundworms live in the digestive tract. Adult roundworms deposit eggs in the intestine which pass out to the environment in manure. After the eggs hatch and the larvae molt, the infective roundworm larvae migrate up the forage and wait to be ingested when livestock graze. Maturation of roundworms to the adult stage requires approximately 3 weeks in cattle.

Sunlight, heat and drying are lethal to roundworm larvae and aid in their destruction in the environment. Winter weather does not destroy the entire larval population on pasture. The larvae migrate into the soil or remain dormant under the snowpack until environmental conditions again become favorable for their development. The growth of parasite larvae in the environment correlates very closely with grass growth, since the same conditions favor both.

Dung pats offer protection to roundworm larvae. If dung pats are scattered around the pasture with harrowing during a wet season, larvae becomes widely disseminated. Since moisture is essential for larval survival and transport, pastures should only be harrowed during hot, dry periods when no cattle are present.

An aquatic snail serves as the intermediate host in the liver fluke life cycle. Where ever the environment is sufficiently moist to support a population of snails, liver flukes may be present and capable of infecting livestock. Water holes, springs, seeps, and leaky troughs may provide an ideal environment for survival. Irrigated Cache Valley pastures are ideal sites for liver flukes and roundworms.

Fall is a common time to treat livestock as they come in from pastures and go onto dry feed. If the decision is made to treat animals with an anthelmintic, managers should consider mode of administration and specific needs of the animals. Consultation with a veterinarian will generally enhance success.

Several commercial products are available for controlling parasites. Some work well on internal and external parasites while others are very specific. Common products include Cydectin, Ivomec, Safe Guard, Valbazen, Dectomax, Noromectin, Agri-Mectin, Rumatel, Phenothiazine, Tramisol, and a few others. Methods of application include, pour-on, injection, bolus, paste, pellet, or drench. Some products have specific guidelines on timing of application and classes of livestock to be treated. Others are quite general. All have label directions that must be followed carefully.