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Animal Health
Fact Sheet



REPRODUCTIVE DISEASES OF SHEEP

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Diseases which reduce the reproduction rate are common in Utah flocks. The major problem seen in the ewes is abortion. With rams, the major disease affecting reproduction is ram epididymitis.

It appears that usually 1.5 to 2.0% of the ewes in a flock abort. It is difficult to reduce the abortion rate below this level with the tools presently available. However, if the rate increases much above this, the producer should be aware that his flock is suffering an increased incidence and initiate efforts to find the cause.

A variety of infectious agents have been identified as causing abortion in ewes. Vibriosis (Campylobacteriosis) and EAE (enzootic abortion of ewes) are the two most common causes. Other agents that must also be considered include the Border Disease virus, Toxoplasmosis, Leptospirosis and *Brucella ovis*. Non-infectious causes, such as poisonous plants must also be considered as potential causes. These include the locoweeds and guteriezzia among others.

A specific diagnosis is very helpful as it allows the producer to devise methods of avoiding problems in future years. Submit several aborted lambs and their placenta (or afterbirth) to a diagnostic laboratory. Some organisms are found in only one of five abortions, even with very good lab techniques. So, if a producer only submits one lamb and no placenta, it is quite likely he will not get a definite diagnosis.

If a diagnosis of vibriosis and/or EAE is returned, vaccines are available to aid in future years. It is usually too late for the vaccines to be of much value for the current lambing and other control measures must be used. Both Colorado Serum Co., and Grand Laboratories now make vaccines for these two diseases of sheep. The specific products available have varied from one year to another, so consult with your veterinarian for current information. These vaccines are designed for use at the beginning of breeding. Smaller flocks should give an annual booster vaccination to each ewe every year. Some range flock producers have felt they get good results by vaccinating just the replacement ewes. The decision will depend on the incidence in recent years and any specific diagnosis.

To control abortion during a current outbreak requires strict sanitation and separation along with use of an antibiotic. Since the infective organisms are spread by aborting ewes, they should immediately be separated from the pregnant ewes, if at all possible. Any feed and water should be placed in mangers and troughs, to avoid contamination from the manure, urine and discharge of infected ewes.

The use of antibiotics is also of great benefit in control of vibriosis and of some help with

EAE. The most rapid results can be achieved by injecting all ewes initially and then starting them on a feed containing antibiotics (such as oxytetracycline or chlortetracycline).

If the problem is due to Border Disease, there may be some abortions, but the main sign is the birth of small, weak and “hairy” lambs. This is a common problem in Utah range flocks, but usually causes the loss of only a few lambs. It is caused by a virus, very similar to the BVD virus of cattle. If previously unexposed ewes are mixed in an infected flock at breeding, there will be exposure. The ewes show no signs of illness, but those infected between 16 and 80 days of pregnancy may give birth to weak, hairy-shaker lambs. These lambs have no immune system and will not survive to weaning. For prevention, it is important to mix new and resident sheep either before breeding (2 months), or avoid mixing them until at least 80 days after breeding has ended.

Toxoplasmosis is carried by infected cats and spread to sheep by feed contaminated with cat feces. It is common for even range ewes to have been exposed to toxoplasmosis. Control cat populations and keep them from nesting and defecating in feed areas. Pregnant women may become infected resulting in abortion or birth defects in the child. Women should avoid contact with cats and aborted lambs whenever there is a possibility they are pregnant.

The major cause of reduced fertility in rams is epididymitis. In farm flocks or purebred flocks, this is caused by one of several bacteria such as *Actinobacillus seminis*. In range flocks, the cause of 95% of the epididymitis is *Brucella ovis*. This bacterial agent is carried by some affected rams in almost all range flocks. It spreads to new rams after they are added to the flock. Rams from farm flocks or purebred flocks usually do not have *B. ovis* epididymitis unless they have been rented out for use in a range flock, or in some other way have been mixed with infected rams or ewes. Virgin rams, kept separate from all older rams, will not have *B. ovis*.

A blood test is now available which makes it possible to eradicate the *B. ovis* agent from a flock. This is an ELISA type of blood test. Either of two management options can be used to achieve eradication.

1) Test all rams in the resident flock. Usually 20-40% will be positive even if you have been culling rams with lesions. Cull these positive testing rams. Also test the new rams purchased, but keep them separate from the old rams. Never mix them. Use the new rams first for breeding and then remove them before putting in the old rams. After breeding, either cull all the old rams, or maintain the 2 ram flocks separate through another breeding and then cull all in the old flock.

-or-

2) Begin in March to blood test all rams and cull those that test positive. Repeat every 1-2 months. Continue until the entire flock tests negative at least twice in a row. Test all new rams prior to adding with the tested flock. Retest one year later. The reason for these precautions is because of some carriers which may not show positive on the first test. If one carrier ram is missed or accidentally mixes with clean rams, the disease will begin again in the flock.

Once a flock is cleared of *B. ovis* there may still be an occasional ram that will develop epididymitis lesions due to the other type of bacteria. This causes a problem for the individual ram, but is a minor risk on a flock basis in comparison to *B. ovis*. Any rams with lesions of the testicles should be blood tested to make sure the problem is not due to *B. ovis*.

Producers can control the major abortion diseases in their ewes and epididymitis in their rams. Doing so will increase the number of lambs weaned for sale. It will also prevent the reproduction disasters which have occurred periodically in the past.

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