OVEREATING IN FEEDLOT LAMBS

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LAMBS AT THE GRAIN TROUGH

THE DISEASE CONDITION known as overeating was encountered in about half the feedlot lambs brought to the diagnostic laboratory of the Colorado Experiment Station during the season of 1938-39. In general, this disease causes greater loss in the feedlots of Colorado than all other diseases combined.

It is sometimes confused with hemorrhagic septicemia, since, in overeating, blotchy hemorrhages frequently occur on the abdominal walls and viscera. Losses due to overeating are often erroneously attributed to the presence of the fringed tapeworm (Thysanosoma actinioides) in the bile ducts and intestines. Data collected by the Colorado Experiment Station indicate that this worm does not cause serious damage in the feedlot.

The term “enterotoxemia” might be an appropriate designation for overeating, since a toxin has been found in the small intestines of a majority of the dead lambs studied.

The eating of too much concentrated feed such as corn, barley, peas and cane seems to be the primary cause of the condition.

The “lambing down” of corn, cane and peas is usually an unsuccessful method of fattening lambs. The lambs do well for a period of from two to four weeks, but after the leaves of the plants have been consumed, leaving a high proportion of the grain, losses commence.

Deaths from overeating may occur early in the feeding period because the animals are given too much grain at the beginning. This also may occur where there is an outbreak of coccidiosis or sore-mouth. In either coccidiosis or sore-mouth it is uncommon for all the animals to be affected to the same degree at the same time, and, therefore, the affected animals eat but little while the more healthy ones consume their own share of the grain, plus a large part of the share of the sick lambs.

Etiology . . .

The exact mechanism of the disease overeating is still to be determined. The Colorado Experiment Station has shown that the filtered contents of the small intestines from feedlot lambs dead of overeating are usually toxic.
for small laboratory animals and lambs when administered intravenously or subcutaneously. This toxic material is thermolabile, being destroyed by heating to 60° C. for 10 minutes. It is always neutralized by Cl. welchii antitoxin type D and usually by type B antitoxin. Although oral feeding of the toxic material has not produced death experimentally, the disease is undoubtedly due to the absorption of a toxin from the small intestines.

**Symptoms . . .**

The animals affected are usually the largest, fattest, most vigorous and greediest lambs in the feedlots. Scouring of some of the larger lambs is a warning sign. It is not uncommon for the owner to report finding lambs dead in the morning, despite the fact that the entire flock was all right the evening before. Some of the lambs are observed to throw back their heads, stagger, fall and die in convulsions. It is more common for the animals to live a few hours, either standing with heads drawn back, moving in a circle, pushing against the corral, or falling to the ground and lying there swinging their legs back and forth. The affected animals rarely recover.

**Pathology . . .**

In some of the acute cases, gross lesions may not be observed. Somewhere along the digestive tract whole grain is usually apparent. It is common to find inflammation of the small intestines and usually of the fourth stomach. It is not uncommon to find congestion of the Pyer’s patches. In acute stages, large, blotchy hemorrhages may be found under the peritoneum on the abdominal walls, on the diaphragm, over the intestines, and on the fourth stomach. The pericardial sac usually contains a straw-colored fluid which is often coagulated. Petechial or ecchymotic hemorrhages may be present under the ecto- and endocardium. Sugar is frequently present in the urine of the acute cases.

**Diagnosis . . .**

The disease can be diagnosed when fat lambs on full feed are dying, provided autopsy fails to show pneumonia and the bacteriological findings are negative. In acute cases, the detection of sugar in the urine is regarded as diagnostic.
Control . . .

Death losses can be stopped overnight by withholding grain. A good control measure is to decrease the grain to the point where no further deaths occur and then to increase it gradually. The lambs should be lotted according to size and packed at the feeding trough so that if a lamb leaves its place no other room is available. The grain in the troughs should be evenly distributed in order that each lamb may get no more than its share. Feeds such as ensilage and beet pulp should be allowed to take the place of some of the grain ration. Ensilage often contains from a fourth to a third of its weight in grain.

The disease overeating is due to improper management. Sudden deaths when lambs are on full feed or a tendency for some animals to hang back from grain troughs should be an indication for a reduction in the amount of grain fed.

REFERENCES


4 Colorado Experiment Station Report, 1938-39. (To be published.)