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HYPOCALCAEMIA IN SHEEP

Hypocalcaemia can cause trouble among in-lamb and lactating ewes, especially if they are grazing lush pasture or young cereal crops. Dry sheep can also be affected. The disease can be confused with pregnancy toxaemia.

A timely reminder issued by Senior Veterinary Surgeon J. Craig.

HYPOCALCAEMIA results from a lowering of the calcium content of the blood and in this respect the disease in sheep resembles the condition of milk fever which affects dairy cows at the time of calving.

Pregnant and lactating ewes are most commonly affected, especially when grazing on lush pastures or on young cereal crops.

Under such conditions droving even for a short distance, or a brief period of starvation resulting from yarding, may precipitate an attack of the disease.

Hypocalcaemia is not always confined to lambing ewes but may also affect dry ewes and sometimes rams, wethers and young sheep.

The outbreaks amongst dry sheep are usually associated with a sudden check to feeding such as may result from shearing, crutching or dipping, or transport by road or rail.

The grazing by hungry sheep of plants rich in oxalates such as sorrel or soursob may also produce the disease.

Cause

As the name hypocalcaemia indicates, the disease is associated with a reduction of the calcium content of the blood, which in severe cases may fall to less than half the normal level.

It may occur under a wide range of conditions but in breeding ewes it is most likely to make its appearance in seasons where there is an early and luxuriant growth of green feed. In pregnant and lactating ewes, grazing on lush pastures or on young wheat or oat crops favours the development of the disease and the risk is increased by droving or yarding. Even driving for such a short distance as from the paddocks to the yards may precipitate an attack. So also may a brief period of starvation resulting from yarding overnight or even for a few hours, particularly if the ewes are driven when released from the yards.

Among other factors which may predispose to the disease are—

• Turning hungry sheep on to green feed after train journeys.
• The grazing by hungry sheep of pastures in which plants rich in oxalates such as sorrel, soursob, or roly poly are abundant. These oxalates reduce the calcium content of the blood.
• A sudden check to feeding such as may result from shearing, crutching or trucking, particularly if this is followed by droving.
• Heavy feeding on cereal grains or cereal chaff which are low in calcium. Sheep fed on these materials do not usually develop hypocalcaemia unless deprived of roughage in the form of dry grazing, clover burr or scrub which contain adequate amounts of calcium.
Symptoms

Hypocalcaemia occurs principally among in-lamb and milking ewes, which may become affected from six weeks before lambing up to about 10 weeks thereafter. Its onset is sudden and a considerable number of animals may show symptoms at the same time.

The early symptoms are staggering or unsteadiness of gait with a stiff action usually affecting the hind legs but sometimes all four legs.

Affected sheep are dull and listless and disinclined to move. When driven they show symptoms of trembling and shivering whilst in motion.

There is usually a watery discharge from the nostrils and some cases may show evidence of scouring.

The animal soon goes down and is unable to rise, and later sinks into a condition of coma. Without appropriate treatment death may occur within 12 hours.

Post Mortem Appearance

At post mortem examination nothing of diagnostic significance will be observed. The third stomach or "bible" is usually hard and contracted and the caecum or blind gut may be distended with gas and somewhat enlarged. The liver and kidneys are congested and there may be large haemorrhages in the external surface of the heart.

Diagnosis

From a consideration of the history of the outbreak, the class of animal affected and the symptoms exhibited, the diagnosis of hypocalcaemia should in most cases present no serious difficulty.

In ewes advanced in pregnancy it might possibly be confused with pregnancy toxaemia. The symptoms of stupor and partial or complete blindness which occur in pregnancy toxaemia are, however, distinctive and the animal lingers for several days before death occurs. In addition, the liver in pregnancy toxaemia is characteristically pale yellow in colour and very soft, whereas in hypocalcaemia it shows little abnormality. Finally, pregnancy toxaemia is most likely to occur during adverse seasons when the ewes are losing condition, whereas in hypocalcaemia the reverse is usually the case.

As a practical means of diagnosis an affected sheep may be injected with the prescribed dose of calcium borogluconate. Should prompt recovery take place this will leave no doubt about the condition with which the animal is affected.

Treatment

For the treatment of affected animals a subcutaneous injection of a solution of calcium borogluconate is recommended. When administered in the prescribed dosage this will increase the calcium content of the blood to the normal level, resulting in rapid recovery.

Should no response occur after an hour the injection should be repeated.

Prevention

Driving or deprivation of food for even a short period may predispose to the disease in lambing ewes and for this reason the flock should as far as possible be left undisturbed.

Where yarding cannot be avoided, the sheep should be driven slowly and quietly, and retained in the yards for as short a period as possible. Yarding overnight should be avoided.

The grazing of young wheat or oat crops should at first be restricted to a short period daily and the ewes should be fed roughage before being turned on to the paddock. Later, as the crop is eaten back and the animals become accustomed to the change of diet, the period of grazing may be lengthened.

Hungry sheep should not be allowed access to plants with a high oxalate content.

When an outbreak has actually occurred a change to poorer pasture in another paddock will usually prevent further losses.