Ewe Feeding and Management in Late Pregnancy and Early Lactation

Our previous Urgent News on sheep (UN 128) covered the period from tupping to the latter stages of pregnancy. This note considers the peri-parturient period and focuses on the key problems that arise. For further detail on the importance of quality ewe feeding at this time, see Contact 159 and Urgent News 89 and 119.

Pregnancy Toxaemia

One of the most common disorders is the metabolic disease pregnancy toxaemia (twin lamb disease). It is a result of a dramatic shortfall in dietary energy intake by the ewe during the final 6 weeks of gestation when 70% of foetal growth is taking place. The increasing size of the foetus reduces rumen volume and decreases feed intake resulting in weight loss. It is common, but not exclusive to, intensively farmed, lowland flocks. In some situations where ewes are housed in too small a space, overcrowding and inadequate trough space may lead to a reduced feed intake in some ewes. Upland and hill ewes can also be affected by the disease when energy supply is compromised which can particularly occur during periods of poor weather around lambing. The recent floods and snow should act as a stark reminder that quality feeding is essential in profitable sheep systems.

The nutrient shortfall during late pregnancy can cause the ewe to have problems synthesising enough glucose to meet foetal demand, causing her to mobilise excessive body reserves and build up ketones that damage the brain and nervous system.

The disease is widespread and can affect any age or breed of ewe.

Ewes that are over fat or in poor condition and/or with twin or multiple lambs are most at risk of twin lamb disease; it is therefore vital to ensure correct ewe nutrition during late pregnancy (see UN 128).

Synthesis of glucose occurs principally in the liver, using propionate absorbed from the rumen as a substrate. Inadequate intakes of fermentable carbohydrate starve the liver of propionate, lowering the circulating levels in the maternal blood.

If plasma glucose concentrations fall below those necessary for the brain to function (c.1.5mmol/l) the circulating blood glucose levels drop leading to the development of twin lamb disease. Stress from worms, lameness, mouth problems, handling, transport and poor weather can also increase the prevalence of the disease.

Signs of Pregnancy Toxaemia

- Ewe isolates herself from the flock
- ‘Star Gazing’ – bilateral blindness
- Thick yellow discharge from the nose
- Drowsiness
- Head pulled backwards or sideways
- Muscle tremors
- Foetal death is common
Feed Choice

The choice of feed is very important, as pregnancy progresses abdominal space becomes more limited and the rumen is compressed. The aim should be to provide a nutrient dense, high dry matter ration based on high quality forage and concentrates.

Prevention

Prevention of pregnancy toxaemia is far better than trying to cure it. The treatment of pregnancy toxaemia is usually unsuccessful. Ewes should maintain their body weight throughout pregnancy as a loss in condition score greater than 0.5 can be problematic.

When moving/transporting ewes care should be taken to ensure that the stress of moving does not put them off their feed for too long.

Sudden changes in their diet should also be avoided; gradual changes should be made to allow the rumen bacteria to adapt.

Feed needs to be increased gradually during the last 6 weeks of pregnancy. The flock should be scanned by ultrasound and grouped according to the number of lambs found and their body condition score. Thin sheep or those with twins or triplets can then be fed a ration with a greater nutrient density.

Feed buckets can be very useful in helping to prevent toxaemia when feeding in extensive grazing systems. They reduce daily labour requirements and ensure a constant supply of supplementary feeds in difficult conditions, providing a readily available supply of nutrients for heavily pregnant ewes.

The new Maxcare Protein Energy bucket is a convenient way to supplement diets, particularly in extensive systems.

Maxcare Glucose Bucket is 100% pure glucose that acts as a concentrated source of readily fermentable rumen energy. Glucose is rapidly converted to VFA’s in the rumen, the propionate indirectly helping maintain circulating blood glucose levels and prevent symptoms of the disorder.

As to the future, improved rationing techniques are in the process of being developed, such as the Ultramix programme which employs the use of Trouw Nutrition’s unique “Rumenac” values to help quantify the level of glucogenic energy in the diet, relating this to the glucogenic requirements of the animal. This new tool should be a significant step forward in our understanding of the complex energetic requirements of the ewe in late pregnancy and early lactation.

Improved understanding of feeding management in late pregnancy and early lactation will help to ensure a well-grown foetus, a strong lamb with good vitality and an ample milk supply to help the lambs grow quickly.

Further information can be obtained from the Frank Wright Trouw technical department on 01335 341102.

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