Lambing
Lambing Part 4 – Ensuring Survival of Newborn Lambs

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The average number of lambs weaned from lowground flocks in the UK is around 155 lambs per 100 ewes put to the ram. The average scanning percentage in these flocks is often over 200 per cent.

Fig 1: The average number of lambs weaned from lowground flocks in the UK is around 155 lambs per 100 ewes put to the ram.

Lamb deaths from birth to three day-old in the majority of UK flocks ranges from 10 to 25 per cent which represents 2 to 6 million dead lambs annually and is a great financial loss to farmers.

In well-managed flocks, vaccinated against toxoplasmosis and enzootic abortion (or EAE-accredited flock), lambing indoors (or outdoors during good weather) the target perinatal lamb mortality figure should be less than 7 per cent; with 5 per cent achievable.

- Average scanning percentage is more than 200%
- Average weaning percentage is around 155%
- Average perinatal mortality is around 10-25%
- Achievable perinatal mortality around 5%

Factors affecting perinatal lamb mortality include:
- Farm management especially nutrition
- Level of flock supervision
- Infectious diseases

Factors affecting perinatal lamb mortality include:

Fig 2: Correct ewe nutrition during pregnancy is essential to reduce lamb losses.

Key factors of flock nutritional management affecting perinatal lamb mortality are:
- lamb birthweight
- ewe body condition score

Fig 3: About one quarter of ewes have triplets - these lambs are at greatest risk if the ewes have not been fed correctly during late pregnancy.

These lambing statistics are influenced by breed, parity and nutrition at tupping time (flushing).

Litter size

In UK lowground flocks, ewes produce
- Singles approximately 15 per cent
- Twins approximately 65 per cent
- Triplets approximately 20 per cent

Lamb birthweights

Optimum lamb birthweights using a Suffolk or other terminal meat breed sire crossed onto a F1 hybrid female (eg Greyface, or Scottish Halfbred) are:
- Single 5.5 to 7.0 kg;
- Twins 5.0 to 6.0 kg;
- Triplets greater than 4.0 kg.

(Note that liveweight measurements for the hybrid ewes listed above range from 70 to 85 kg).
Lamb birthweight changes little within the first 24 hours therefore all lambs born within the previous 24 hours can be weighed to provide a representative population sample during on-farm investigations. Lamb birthweights more than 1.0 kg lighter than those quoted above are strongly suggestive of chronic ewe undernutrition during late gestation. Ewe condition scores must also be checked with low values consistent with poor energy supply.

Hill breeds in the UK, such as the Scottish Blackface (liveweight measurements range from 45 to 65 kg), will have birthweights 1 to 1.5 kg lighter than those stated above.

**Fig 4: Single lambs typically weigh 5.5 to 7 kg.**

**Recording birthweights**

Lamb birthweights are important to determine the health of the ewes and the flock. Lamb birthweights can be used to predict future lamb growth and production. Lamb birthweights can also be used to identify ewes with poor nutrition or health issues. Lamb birthweights can also be used to identify ewes with poor nutrition or health issues.

**Ewe body condition score**

Ewe body condition scores (see prelambing bulletin) are low (2.0 or less; scale 1 to 5) when late gestation nutrition has been inadequate for more than two weeks. Where the flock is managed as one group, low body condition scores are most noticeable in multigravid ewes especially those ewes with three or more lambs in-utero. Where feeding of the whole flock started on the same date, later-born lambs typically have heavier birthweights due to a longer period of dam supplementary feeding.

Flock problems such as parasitic gastroenteritis and fasciolosis can lead to low body condition in a large percentage of ewes and this problem is exacerbated by litter size. Lambs are smaller than normal even with prompt treatment and supplementary feeding.

**Birth injuries**

Lack of oxygen and trauma during the birth process can be a contributing factor to lamb losses. Typical examples may be anterior presentation with either unilateral or bilateral shoulder flexion (hung lambs). Such lambs may present with considerable swelling of the head when it is lodged within the maternal pelvis.

The most common skeletal injury is fracture of a number of ribs along one side of the chest when a large lamb is delivered in posterior presentation. These lambs show an increased respiratory rate with painful chest movements. The chest wall is flat instead of convex.

**Meconium staining of the lamb’s fleece**

Hungry lambs are easily spotted and must be attended to immediately by the shepherd. If neglected, the lamb's condition may progress to coma and death but this may take two to three days during which time they should be detected by the shepherd and fed accordingly. Coma and death can occur more rapidly in starved lambs exposed to severe weather conditions. In many situations, lambs which have failed to ingest sufficient colostrum (protective immunoglobulins) succumb to infectious disease such as watery mouth disease or septicemia.
Meconium staining of the fleece is an indication of a stressful birth and such lambs require special attention to ensure they suck quickly.

**Colostrum ingestion**

Colostrum in the lamb’s abomasum immediately caudal to the costal arch can readily be detected by gentle palpation. This can be undertaken in the standing lamb or after the lamb has been held up by the thoracic limbs.

![Fig 8: Colostrum in the lamb’s abomasum can readily be detected by gentle palpation.](image)

Colostrum in the lamb’s abomasum immediately caudal to the costal arch can readily be detected by gentle palpation. This can be undertaken in the standing lamb or after the lamb has been held up by the thoracic limbs.

The gastrointestinal tract of the newborn lamb is empty and it should be easy to detect whether the lamb has ingested up to 500 ml of colostrum (more than 10 per cent of its bodyweight). Abdominal distension does occur in watery mouth disease but affected lambs are usually 24 hour-old and should not be confused with colostrum ingestion by lambs within the first few hours of life.

**Ensuring the lamb’s best start in life**

There are three critically important events which must happen to ensure that newborn lambs have the best chance of survival.

- Lambs must be born into a clean environment to an attentive dam with a good colostrum supply
- The lamb must ingest sufficient colostrum (200 ml/kg) during the first 24 hours of life, and 50 ml/kg within the first 2 hours, if not sooner
- The navel must fully immersed in strong veterinary iodine BP within the first 15 minutes of life, and this procedure repeated at least once 2 to 4 hours later.

![Fig 10: Good maternal behaviour is important to ensure a good start to the lamb’s life.](image)

1. **Clean environment**

Poor hygiene standards can increase the prevalence of infections of lambs (watery mouth, joint ill, navel ill) and their dams (mastitis and metritis).

2. **Colostrum ingestion**

The lamb must ingest sufficient colostrum (200 ml/kg) during the first 24 hours of life and 50 ml/kg within the first two hours, if not sooner.

If the lamb has not sucked colostrum then some assistance is necessary and various methods are employed:

- Restrain the ewe and gently put the teat into the lamb’s mouth at the same time as gently expressing some colostrum onto the lamb’s tongue to encourage sucking

![Fig 11: Restraint of the ewe while the lamb is guided to the teat.](image)

- Sit the ewe on to her hindquarters and lay the lamb on its side, then put the teat into the lamb’s mouth at the same time as gently expressing some colostrum onto the lamb's tongue to encourage sucking

Encourage the lamb to suck colostrum stripped from either the dam, another ewe, or bovine colostrum from a bottle and teat.

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Administer colostrum stripped from the either dam, another ewe, or bovine colostrum via a stomach tube. Colostrum is very viscous and it may prove necessary to dilute the colostrum with warm water so that it will easily flow through the stomach tube. Alternatively, a 50 to 60 mls syringe can be filled then discharged through the stomach tube.

Ingestion of colostrum is the single most important event in the lamb's life. Immunoglobulins in colostrum afford specific protection against clostridial and other diseases depending upon dam vaccination status, as well as non-specific immunity. Colostrum is an essential source of energy, minerals and vitamins, as well as possessing laxative properties. Despite the importance of colostrum in ensuring the health of the neonatal lamb, studies have consistently shown that many lambs, particularly triplet and small birthweight lambs, do not suck sufficient colostrum during the first few hours of life.

Treatment of comatose lambs

Treatment of comatose lambs is divided into two age groups; either less or more than 6 hours-old.

Treatment of comatose lambs less than 6 hour-old

Coma should not arise in lambs less than 6 hour-old unless the lambing flock has suffered adverse weather conditions. This situation occurs most commonly in the UK when ewes lamb outdoors during severe weather conditions, and in hill flocks which lamb outdoors where there is no supervision during the hours of darkness. Hypothermic lambs less than 6 hour-old do not require intraperitoneal glucose injection because the lamb is born with considerable reserves which can be mobilised to produce glucose.
This metabolic crisis can be corrected by intraperitoneal injection of 25 mls of 20 per cent glucose solution followed by placing the lamb in a warming box with the thermostat set at 45°C. It is essential that the intraperitoneal injection is administered before the lamb is placed in the warming box. The lamb must be regularly checked if the box does not have a thermostat to prevent overheating.

**Intraperitoneal injection**

The lamb is suspended vertically by the front legs. The 19 gauge 25mm long needle is introduced through the body wall 2 to 3 cm to the side of the navel and 2 to 3 cm caudal. The needle point is directed towards the lamb's tail head. The solution is slowly injected in to the body cavity once the needle has been introduced up to the hub. The recovery of hypothermic and hypoglycaemic lambs takes 30 to 60 minutes.