

Assess In-lamb Ewes to Maximise Lamb Output and Survivability

The nutritional status of breeding ewes should be monitored at key points throughout the year, and especially so in the lead up to lambing, say vets Russell Fuller of Tyndale Vet Practice in Gloucestershire and Joe Henry of Alnorthumbria Vet Group in Northumberland, giving their recommendations on determining the right level of feeding for ewes to help maximise the numbers of lambs ultimately reared.



Russell explains: "Too often in-lamb ewes are fed silage and concentrates in the same quantities as a matter of routine from year to year. But silage quality – the energy and protein content – will vary from season to season, field to field. Even big bales from the same field can feed differently. With silage such an important factor in feeding in-lamb ewes, its quality should be analysed each season.

"The body condition of ewes as they approach the last six weeks of lambing may also differ from season to season. This will determine how much energy and protein they will require in the final run-up to lambing."

Condition scoring

Russell and Joe both recommend that ewes are always body condition scored and have blood samples taken to reveal their metabolic profiles so their nutritional requirements can be more appropriately met.

Russell continues: "With lowland flocks, and also small flocks, there's a tendency to overfeed ewes in the run-up to lambing. It's important to prevent ewes from becoming over-conditioned for two reasons – fat ewes are more likely to have a difficult lambing and it's a waste of money on feed. If silage quality is very good there is scope to cut back on the amount of feed fed without the risk of twin-lamb disease. Alternatively, feed cost savings could be made by replacing



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an 18% crude protein blend with a lower protein one."

In hill and upland flocks a shortage of energy and protein supply is frequently more of a problem than overfeeding. Metabolic blood profiling provides an objective measure of an animal's energy and protein status. It is used by dairy farmers to routinely monitor a herd's nutritional requirements and can also be of great value to sheep flocks.

Scanning

Joe says: "Ewes should always be scanned at between 60 and 90 days of gestation, so they can be grouped and managed according to the number of lambs they are carrying. But in addition, in the last three weeks, it's crucial to determine the energy and protein status of each management group to tailor feeding regimes."

Russell adds: "Ewes that are in poor condition are more likely to succumb to twin-lamb disease, which is frequently fatal. However, metabolic blood profiling can be carried out for the whole flock for less than the cost of a dead ewe. So it really is worth doing!"

Blood sampling needs to be carried out around three weeks before lambing is due to start. Any earlier than this and ewes are not yet in the high risk period. Any later and it will be too

late to make the required nutritional adjustments. Energy status is determined by measuring the levels of beta-hydroxybutyrate (BHB) in the blood. These increase when the animal is short of energy and is mobilising its body fat reserves.

Joe says: "Ewes showing low energy status need to have their feed ration increased. However, ewes can only consume a maximum of around 2-2.5% of their bodyweight in dry matter. That's around 1.6-2.0kg DM for an 80kg ewe. So the ration must be of an energy density to enable this.

Consequences of poor ewe nutrition in last 4-6 weeks of pregnancy in the ewe:

- Twin-lamb disease
- Hypocalcaemia
- Mastitis
- Poor quality colostrum
- Less milk produced
- Fewer lambs reared

In the lambs:

- Lighter birthweights
- Reduced survival rates
- Hypothermia in newborns
- Water mouth/rattle belly
- Joint ill/navel ill
- Scour
- Pneumonia
- Longer time to finish

Target body condition scores			
	Hill ewes	Upland ewes	Lowland ewes
At weaning	2.0	2.0	2.5
At tupping	2.5	3.0	3.5
Mid-pregnancy and at lambing	2.0	2.5	3.0

Source: Eblex



Grouping ewes according to body condition score ahead of lambing can help avoid nutritional problems.

"If there is a big variation between ewes in a group a review of the feeding system may be needed. Is there enough trough space? Can the shy feeders (the thin ones) be run in a separate group? In some cases, it may be necessary to feed ewes three times each day instead of two, to ensure they have the appetite to consume the required rations.

"In late pregnancy a shortfall of protein will reduce the ewe's milk production and this impacts on lamb health and growth too. So a ewe's protein status is also important and again metabolic blood profiles are invaluable.

"Two measures are used: urea levels indicate short term protein status, whilst albumin levels represent the longer term historic picture. If albumin levels are low but urea level is normal, this indicates the presence of parasites, such as liver fluke or worms. Where urea level is low but albumin is not the remedy is straightforward – simply increase dietary protein intakes by feeding more cake and/or increasing the protein content of the cake."

More lambs reared

The consequences of inadequate ewe nutrition follow through into the survival and growth rates of lambs – see panel.

Russell explains: "A ewe's milkiness is influenced by her energy and protein status and directly impacts on lamb survival rates. Where these are low, not only will her milk yield be low but her colostrum – an essential factor in lamb survival – will also be poor quality. This then predisposes lambs to more neonatal diseases such as joint ill and watery mouth."

Joe echoes this: "The aim has to be to maximise the number of lambs reared per ewe tupped, so always assess silage quality and body condition score the ewes. Ask your vet about metabolic blood profiling. Ask yourself whether you are feeding the same quality and quantity as last year, and previous years, and whether that's the right approach to be taking.

"Making informed decisions – from knowing the nutritional status of ewes – allows a more economic use of concentrates, and promotes good lamb viability, maximising the lambs per ewe reared.

Looking ahead to post lambing, Russell says: "Over a 12-month period, breeding ewes will tend to spend three months rearing lambs, four months dry and five months of being pregnant. They need to be managed so their body condition scores can be raised or lowered to the targets – see table – in a gradual and 'safe' manner.

"So when the lambs are weaned, ewes should be condition scored again. Thin ewes can then be given extra feed or good grazing so that they can regain condition and be fit again for tupping – this will help increase the potential number of lambs conceived."



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