The traditional and alternative options for winter ewe nutrition

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The measure of success for winter feeding is healthy ewes at the right condition score to give birth to healthy lambs, without having compromised the supply of grass post lambing.

Whatever system is used, the ewes' requirements for energy, protein and major and trace minerals must be met. These requirements vary with stage of pregnancy, number of lambs and size of ewe. For example, see the differing requirements of a 70kg ewe in table 1.

When feeding sheep, it is crucial to remember they are a ruminant and most of the diet should therefore be forage – a healthy rumen means a healthy ewe. Feeding too much concentrate in one feed can cause a significant drop in rumen pH.

Neonatal losses

A high proportion of neonatal lamb losses can be attributed to inadequate nutrition during pregnancy. Having lambs born at the correct birthweight to ewes in the correct body condition with a good supply of colostrum is the best prevention for all the diseases of young lambs. But also be aware that over-fat ewes are prone to lambing difficulties.

Getting 90% of ewes at the correct condition score at key points through the production cycle (*see table 2*) minimises the chance of problems and avoids having a group of over-fat ewes trying to lose weight, or trying to get condition on to thin ewes. In addition to regular condition scoring, blood sampling three weeks before the start of lambing allows an assessment of the adequacy of energy and protein supply and any adjustments to be made.

Nutrition ahead of lambing is key, but different approaches can be considered.

In addition to the traditional grass or forage-plus-concentrate feeding, there are some alternative approaches to managing ewes over winter.

One alternative is all-grass wintering (AGW), and AHDB Beef and Lamb has been working with pilot farms to develop guidelines for tight paddock grazing through the winter. It's a cliche to say grazed grass is the cheapest feed, and most farms will try and keep sheep grazing as long as possible before providing supplementary feed, but it is difficult to calculate how much ewes are eating and exactly when supplementary feed is required. In addition feeding in the field often leads to areas of poaching around troughs or ring feeders. However, the AHDB work, grazing at a high stocking density in paddocks to which ewes are moved every one to three days, aims to improve grass utilisation while minimising poaching. Grass utilisation may only be 50-60% with set stocking, but this can be increased by 20-30% using all-grass wintering.

The system is most suitable for well-draining soils, ideally on a single block of land to allow easy movements and in a climate that allows some winter grass growth. AHDB Beef and Lamb has monitored it on farms from Cornwall to Northumberland, finding that in South West England it was possible to keep ewes out all winter, whereas typically

Table 1: Nutritional requirements of a 70kg ewe

	Number of lambs	ME (MJ)	Protein (g)
Early pregnancy	-	8	
Seven weeks pre-lambing	Single	10.2	87
	Twin	11.4	93
	Triplet	12	96
One-week pre-lambing	Single	14.4	107
	Twin	18.3	126
	Triplet	20.3	136

Source: AHDB Beef and Lamb: 'Improving Ewe Nutrition for Better Returns'.

Table 2: Target body condition scores

	Lowland ewes	Upland ewes	Hill ewes
Weaning	2.5	2	2
Tupping	3.5	3	2.5
Mid-pregnancy	3	2.5	2
Lambing	3	2.5	2

For more information on condition scoring see AHDB Beef and Lamb: 'Condition Scoring of Ewe for Better Returns'.

Table 3: Required dry matter intake (DMI) for ewes in an all-grass wintering system

	DMI as % bodyweight
Pre-scanning	1.5%
Post scanning singles	1.6%
Post scanning twins	2.1%

Source: AHDB Beef and Lamb: 'All Grass Wintering of Sheep for Better Returns'.