

Ewe Body Condition Impacts on Weaning Rate

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It has long been recognised that liveweight per se is not a reliable indicator of the body reserve status of the ewe unless age and breed are known and even then can be misleading. For example, the mature weight of ewes differs substantially between breeds (Table 1). Furthermore the weight of ewes within a flock varies according to age. Therefore, if the mean ewe weight in a flock is 70 kg, the weight of sheep will vary by around 10 kg due to age (Table 2).

Table 1. The effect of ewe breed on average mating weight

Breed	Weight (kg)
Purebred Suffolk	85
Purebred Texel	80
Purebred Belclare	76

(Hanrahan, J.P. – personnel communication)

Table 2. The effect of ewe age on liveweight at mating

Age at mating (years)	Weight (kg)
1.5	66
2.5	70
3.5	75

(Hanrahan, J. P. – personnel communication)

Condition score, which is assessed on a scale of 0 to 5 is frequently used as a management tool, particularly with dairy cows, for nutritional management to have animals at their optimum for lactation and for breeding. Condition score is a “hands on” method of assessing the fatness (or condition) of animals. In sheep production, the most important time in the annual cycle for the ewe to be at target condition score is at the point of mating. Condition scoring does not require any equipment, is easy to learn and overcomes differences in ewe weight due to breed, age and physiological state (e.g. pregnancy).

Impact of Condition on Weaning Rate

Condition of the ewe at mating impacts on subsequent litter size and weaning rate. Research undertaken on the lowland ewe flocks at Athenry and on 17 commercial lowland flocks, as part of the Technology Evaluation Transfer (TET) project, clearly illustrates that each one unit increase in

condition score (within the range 2.5 to 4) at mating increases litter size by 0.13. This increase in litter size subsequently increases weaning rate by 0.1 lamb per ewe put to the ram. Mating ewes at condition score of less than 2.5 increases the risk of barrenness, consequently, further reducing weaning rate. Each 0.1 lamb/ewe increase in weaning rate is worth approximately €/ewe put to the ram in flocks which produce mid season prime lamb fit for slaughter.



Ewe condition at mating has a direct effect on lambs reared per ewe put to the ram

Effect of Weight on Condition Score

Research at Athenry clearly illustrates, that within the condition score range of 2.5 to 4.0 for many lowland breed types, that each 1 unit increase in condition score is equivalent to an increase of 12 kg in liveweight. Consequently, for a flock to be at the target condition score (4.0) at the point of mating it is essential to condition score the flock well in advance (i.e. at weaning) to enable any changes in condition to be achieved. In general, ewes on good grass swards have the ability to gain approximately to 1 kg/week. Condition scoring the flock at or shortly after weaning provides adequate time, if required, to increase condition score cost effectively through increased grass intake. At weaning ewes should be at least condition score of 2.5.

In the past prior to mating, ewes were “flushed” which is the practice of reducing condition post weaning by tight grazing, and then raising the plane of nutrition for about three weeks prior to going to the ram so that the sheep should be improving in liveweight and body condition at mating. However, if ewes are in good condition after weaning they should not be deliberately slimmed down with the intention of improving condition prior to mating. This practice would be an inefficient use of energy intake by the ewe.



Regular body condition scoring (BCS) and adjusting of feeding rates according to BCS is essential to ensure that ewes reach the target BCS of 3.5 at mating.

How to Condition Score Sheep

Body condition score is assessed by handling the ewe along the top and side of the back bone in the loin area immediately behind the last rib and above the kidneys (Figures 1 and 2) as follows

1. Feel the degree of sharpness or roundness of the spinous processes using the finger tips.
2. Feel the tips of the transverse processes using finger pressure for sharpness or roundness.
3. Press the fingers into the area between the spinous and transverse processes to determine the eye muscle and fat cover.

A brief description of each of the scores are as follows:

- Score 0: It is not possible to detect any muscle or fat tissue between the skin and bone. The animal is extremely emaciated and on the point of death. Score 0 is rarely seen on Irish farms.
- Score 1: The spinous and transverse processes are sharp and prominent with a distinct gap between each process. (Figure 3).
- Score 2: The spinous and transverse processes are prominent but smooth. It is possible to press the fingers under the transverse processes with some pressure.
- Score3: The spinous processes are smooth and rounded and are detectable with a little pressure. The transverse processes are smooth and rounded and the ends are only detectable with firm pressure. The eye muscle is full with some fat. (Figure 4).
- Score 4: The spinous processes can be detected only with pressure as a hard line. The transverse processes cannot be detected. The eye muscle is full with a moderate degree of fat cover.
- Score 5: Neither the spinous or transverse processes can be felt, even with pressure. There is a thick cover of fat and the eye muscle is full. There is a depression along the mid line fat where the spinous processes would normally be felt. (Figure 5).

Experienced operators use half scores (i.e. 2.0, 2.5, 3.0, 3.5, etc) to enable more accurate prediction of ewe condition.

Summary

1. Ewe body condition at mating affects litter size and weaning rate.
2. Condition score is easily accessed on a score from 0 – 5 by handling the ewe in the loin area
3. Each 1 unit increase in condition score increases weaning rate by 0.1 lamb/ewe put to the ram which is worth approximately €9.
4. To increase condition score by 1 unit the ewe must gain 12 kg live weight..

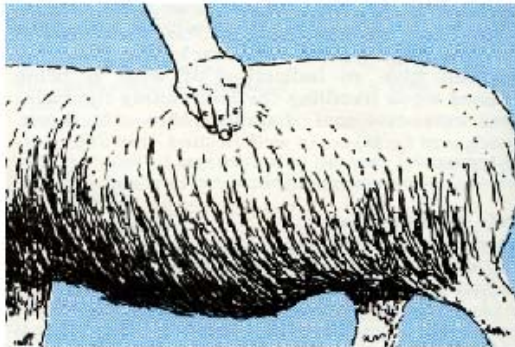


Figure 1. Condition scoring sheep in the loin area

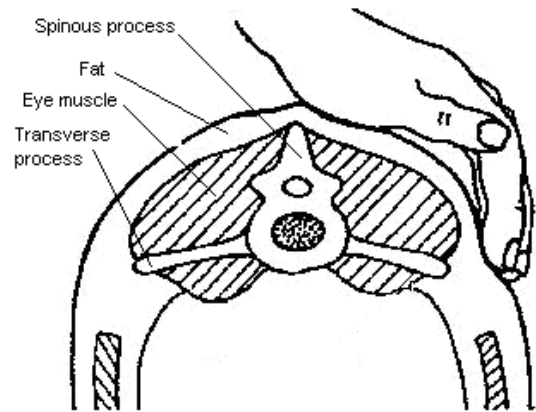


Figure 2. Feeling the tips of the spinous and transverse processes in the loin area

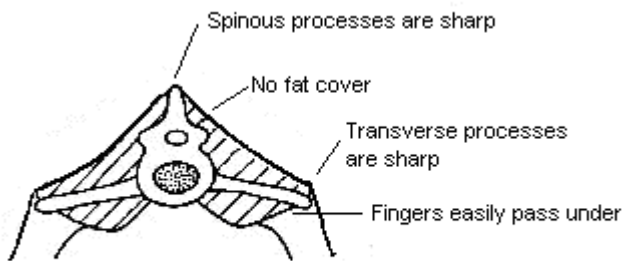


Figure 3. Condition score 1

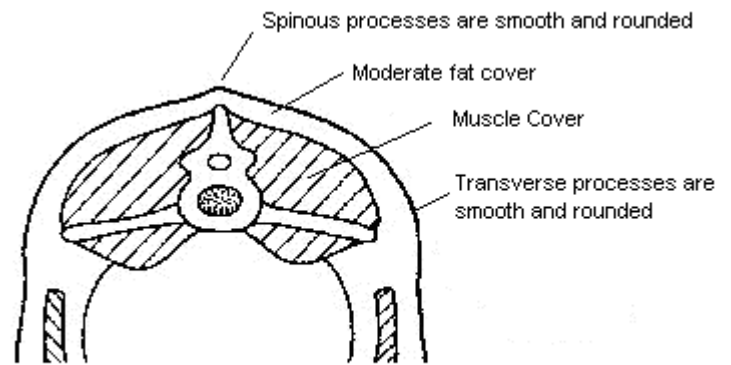


Figure 4. Condition score 3

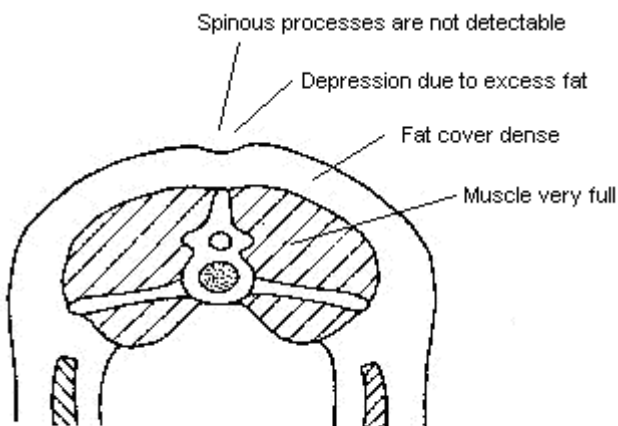


Figure 5. Condition score 5