

Grass & Fodder shortage: Tech

By: Frank Hynes, Sheep Specialist, Teagasc, Athenry (April 2018)

General Concern over Grass Shortage

Insufficient grass

In early April the weather continues to cause problems. Grass growth is significantly behind what is normal for the time of year. Even following an improvement in the weather it will take some time for grass covers to recover to an acceptable level on most farms.

If there is insufficient grass (less than 4.5 cm) during early lactation milk yield will be reduced and there is little option but to supplement the ewe. While ewes will be reasonably well fed when grass covers over 3.5 cm is available, it is important not to have ewes grazing down to this level for a long period without supplementation. Ewes will not be adequately fed and will lose condition quickly. Milk yield will also drop and lamb performance will suffer.

Action required by farmers

Apply fertiliser

Where no fertiliser has been applied, every effort should be made to apply nitrogen at the first available opportunity, when weather and ground conditions allow you to travel on land. The nitrogen will then be available to boost grass growth once soil temperatures increase. This will help rectify the situation once grass growth recovers. The fertiliser should be purchased in advance and be available in the yard for when it is needed. Apply at the rate of 29kg N per hectare (23 units per acre) for lowly stocked farms, (6 – 7 ewes/Ha), gradually increasing for higher stocking rates to double this when stocking rate is greater than 10 ewes per hectare. If your soil is deficient in P and K, consider using a compound fertiliser such as 1.5 bags of 18:6:12 for lowly stocked farms and increasing up to 2.5 bags on highly stocked farms.

Assess Current Fodder Stocks

Most sheep farms throughout the country also have cattle. When budgeting feed on the farm, all livestock should be included in the budget. Farmers are encouraged to:

- Use hay / straw / concentrate feeds to stretch silage over the coming weeks.
- While concentrate rations are expensive, they can replace silage as the main diet for ewes in late pregnancy and early lactation.
- Care must be taken when feeding high levels of meals to avoid acidosis. Adequate trough space must be provided as well as a constant supply of clean water.
- Feeding 2-3 kg of meals to cattle will save 30-40% on silage demand from the cattle but access to the silage must be restricted for this to work. If offering restricted silage to cattle, it is critical that all cattle in a pen can eat at the same time therefore adequate space must be provided to allow all cattle eat at the same time.
- Check the value of feeds with the local Teagasc adviser, before purchase. This is particularly important for forages.

Extra steps to be taken

- While waiting for grass supply to recover, on farms where there is a shortage of fodder, feeding additional concentrates is necessary (Tech Note 2 for more detail).
- If cash flow is tight, farmers should talk to the bank, local adviser or merchant.
- If there are animals on the farm intended for sale, consider selling now where it makes economical sense to do so.

Nutritional Requirements of Ewes

The main nutritional requirements of ewes with lambs at foot are energy and protein. When grass is plentiful, intake for ewes rearing twins will range from 2.4 kg grass DM from 1 week post lambing to 3.4 kg when the ewe is 7 weeks lambing.

Table 1. Grass intake (kg DM/day) by lactating ewe with twin lambs

Lactating week	Ewe	Twin Lamb	Total (ewe+twins)
1	2.4	-	2.4
3	2.4	0.1	2.6
5	3.2	0.3	3.8
7	3.4	0.5	4.4
9	3.0	0.7	4.4
14 (weaning)	2.3	1.2	4.7

Furthermore, as lambs get older they too will increase in their grass requirements, ranging from 0.1 kg DM when lambs start to nibble at grass from about 3 weeks of age to 0.5 for a lamb that is 7 weeks old (See Table 1). This demand by lambs will increase further as the lambs get older. Energy requirements for a 70 kg ewe rearing twins growing at the rate of 275 g per day are approximately 2.7 UFL. Furthermore, crude protein requirements are approximately 430 g per day. Normally, when grass supply is sufficient, these requirements can be met from grass alone. However, when grass supply is deficient, supplementation is required. (See Tech note 2 for guidelines when grass is scarce.)



If there is insufficient grass (less than 4.5 cm) during early lactation milk yield will be reduced and there is little option but to supplement the ewe.

Creep Feeding Lambs

Twin rearing ewes reach peak milk yield approximately 3 weeks post lambing and ewes with singles will peak at about 4 weeks. It is therefore important to try to meet nutritional requirements until these dates have passed. Otherwise lamb performance will suffer long term throughout the year. Once these dates have passed it is far more practical to offer supplementation in the form of creep feed to lambs if there is still a grass shortage. It is also worth noting that generally, at a similar level of nutrition, ewes rearing twins yield approximately 30 to 40% more milk than ewes rearing singles. Therefore, special care must be taken with twin rearing ewes.

Creep Grazing (For lambs > 6 weeks old)

Forward creep grazing older lambs ahead of ewes has the biggest advantage when grass supply is tight. It gives lambs priority to the scarce supply of high quality grass. Allowing lambs forward graze in front of ewes will improve lamb performance as it allows them priority access to the best grass before the ewes. The ewes can be maintained on tighter grass for a longer period. Their condition can be recovered later when grass supply becomes more

plentiful. It has been shown to result in lambs being 2kgs heavier at weaning. Replacing the existing gate with a creep gate that has 225mm (9 inches) spacing enables lambs to graze in front of ewes.



From 3 to 5 weeks post lambing it is more practical to offer creep feed to lambs.

Concentrate Supplementation

The level of concentrate supplementation will depend on the level of grass available.

Scarce grass

Every farm will be different so it is important to get specific advice. However, it should be useful to bear a few points in mind.

- The level of available grass varies from farm to farm.
- Sheep are able to graze much tighter to the ground than cattle.
- During very dry weather, grass dry matter is much higher than under normal weather conditions. Furthermore, while grass might be scarce, grazing conditions are good in dry conditions. This results in very little wastage of grass. Therefore, intake may be much higher from grazed grass than may seem obvious.

Grass 3.5 to 4.5 cm

When grass is in the range of 3.5 to 4.5 cm, sheep will be somewhat restricted. When ewes are in good condition and access to this type of grass is over a short period of time no supplementation is required. The ewes may be allowed milk off their back, lose some condition and therefore no concentrates are required. However, ewes in poor condition (CS < 2.5) should be supplemented. Furthermore, if ewes, even in good condition, are being grazed on this pasture over a prolonged period, such as a week or more, some level of supplementation is advisable. See Tables 1 & 2 below for recommendations.

Table 1. Concentrate requirements for ewes rearing twins growing at 275 g/day when grass intake is approximately two thirds of normal (Grass height 3.5 to 4.5 cm).

Ewe Condition	Grass intake	Concentrates needed	Comments
Good (CS 2.75 – 3)	2 kg DM	0.5 kg 15% Protein	Appetite will not be satisfied. Some roughage, even of poor quality may fill this gap.
Poor (CS 2.25 – 2.5)	2 kg DM	0.75 kg 15% Protein	

Table 2. Concentrate requirements for ewes rearing singles, growing at 300 g/day when grass intake is approximately two thirds of normal (Grass height 3.5 to 4.5 cm).

Ewe Condition	Grass intake	Concentrates needed	Comments
Good (CS 2.75 – 3)	2 kg DM	No supplementation	Appetite will not be satisfied. Some roughage, even of poor quality may fill this gap.
Poor (CS 2.25 – 2.5)	2 kg DM	0.5 kg 15% Protein	

Grass height 2.5 to 3.5 cm

When grass height is in the range of 2.5 to 3.5 cm intake will be adversely affected. It will be approximately one third of normal intake required. Concentrate requirements for twin rearing ewes and single rearing ewes are presented in Tables 3 & 4 respectively. As the overall volume of concentrates is increased, the protein percentage can be reduced to supply the required level of crude protein. If ewes are in good condition, they may be allowed milk off their back, lose some condition and therefore reduce concentrates required. However, if ewes are already in poor condition, this is not recommended and will not work.

Table 3. Concentrate requirements for ewes rearing twins growing at 275 g/day when grass intake is approximately one third of normal.

Ewe Condition	Grass intake	Concentrates needed	Comments
Good (CS 2.75 – 3)	1 kg DM	1 kg 20% Protein	Appetite will not be satisfied. Some roughage, even of poor quality may fill this gap.
Poor (CS 2.25 – 2.5)	1 kg DM	1.4 kg 15% Protein	

Table 4. Concentrate requirements for ewes rearing singles growing at 300 g/day when grass intake is approximately one third of normal.

Ewe Condition	Grass intake	Concentrates needed	Comments
Good (CS 2.75 – 3)	1 kg DM	0.5 kg 20% Protein	Appetite will not be satisfied. Some roughage, even of poor quality may fill this gap.
Poor (CS 2.25 – 2.5)	1 kg DM	0.75 kg 15% Protein	

No grass (< 2.5 cm)

If grass heights are below 2.5 cm, sheep will be able to graze little or no grass (i.e. no grass available for grazing). Therefore, concentrate levels described in tables 3 and 4 should be increased further by approximately 1 kg concentrates for the first 3 to 5 weeks of lactation or until grass becomes available. Some roughage, even if poor quality should be offered to help prevent digestive upsets and to fill appetite. This is also required by young lambs to help rumen development. This will also occur if grass is covered in a heavy fall of snow. Particular care is required in such circumstances. The roughage then becomes even more important. Giving high levels of concentrates when ewes are not used to eating large volumes will lead to digestive upsets. Changes to the diet should be made gradually

Water

With the extra dry feed being offered to sheep, make sure to supply ad lib access to clean fresh water at all times. Ewes in early lactation need up to 10 litres per day. There will be very little moisture in dry feed (see separate Tech note on water requirements).