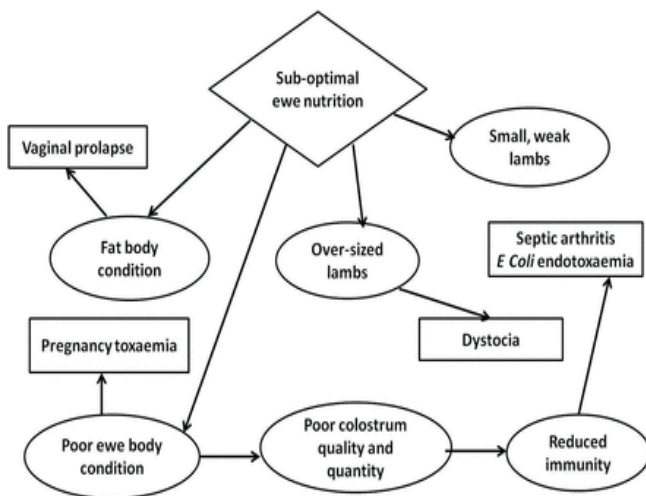


Feeding pregnant ewes

Although for most of you the tups have only just gone in, it is time to start thinking about how you are going to manage and feed the ewes through to lambing. With the dry summer this year leading to potential forage shortfalls, planning ahead is even more important.

Correct nutrition of ewes will lead to a whole host of benefits for health and profitability of the flock. Ewes will have better immunity, produce bigger and livelier lambs, produce better colostrum and produce more milk leading to better growth rates and immunity in the lambs.

Effects of sub-optimal nutrition:



Pregnancy can be divided into three stages:

1. Implantation:






Once the rams have served the ewes the growing fetus needs to implant and establish itself within the womb. Ewes should have been on good quality pasture during tugging, so maintaining the ewes on good quality autumn grass for an additional month should allow for a good start to pregnancy.

2. Placental development:

The second and third months of pregnancy is when the placenta develops. This provides oxygen and nutrients to the developing lambs. Energy requirements are still relatively modest at this point so late season grazing or poor-quality silage should be sufficient. The best way to monitor the feeding of the ewes is body condition scoring. This is done by assessing the amount of fat over the processes of the spine in front of the pelvis. It is scored from 1 to 5. In mid pregnancy all ewes should score between 2.5 and 3. Condition scoring at one-month post tugging will allow you to gauge the level of feeding needed in this period.

Body condition score chart:

How to Condition Score

Score 1		The vertical and horizontal processes are prominent and sharp. The fingers can be pushed easily below the transverse and each process can be felt. The loin is thin with no fat cover.
Score 2		The vertical processes are prominent but smooth; individual processes being felt only as corrugations. The horizontal processes are smooth and rounded, but it is still possible to press fingers under. The loin muscle is a moderate depth but with little fat cover.
Score 3		The vertical processes are smooth and rounded; the bone is only felt with pressure. The horizontal processes are also smooth and well covered; hard pressure is required with the fingers to find the ends. The loin muscle is full and with a moderate fat cover.
Score 4		The vertical processes are only detectable as a line. The ends of the horizontal processes cannot be felt. The loin muscles are full and rounded, and have a thick covering of fat.
Score 5		The vertical and transverse processes cannot be detected even with pressure; there is a dimple in the fat layers where the processes should be. The loin muscles are very full and covered with very thick fat.

3. Fetal growth and development:

75% of lamb growth occurs within the last six weeks of pregnancy and this puts a huge strain on the ewe's energy reserves. Death rates in lambs can be greatly affected by ewe nutrition. Flocks found to have inadequate feeding of ewes have had death rates of over 40% while flocks who have fed their ewes correctly can achieve rates below 7%. Scanning of ewes to establish number of lambs is essential to any successful plan for ewe nutrition. The amount of energy (ME) needed from a diet increases with the amount of lambs in a pregnancy. See the table below (based on a 70kg ewe):

Litter size	Weeks in lamb			
	14	16	18	20
1	10	11	12.5	14.4
2	11.5	13	15.3	18.3
3	12	14	16.7	20.3

So, you can see from this that a ewe in the last week of pregnancy carrying triplets needs double the amount of energy as a ewe four weeks from lambing carrying a single. Splitting of ewes according to how many lambs they are carrying allows each group to be fed accordingly.

To use this information to formulate rations it is important to know how much a ewe will eat in kg of dry matter (DM). A pregnant ewe will eat a maximum of 1.6kg DM a day, however this will decrease as the lambs grow and reduce the amount of space within the abdomen. It is also affected by the type of forage fed. Ewes will eat much less straw and hay but can reach 1.6kg if fed high quality silage.

Now we know how much energy the ewes need, and how much they can eat, we need to consider the energy density of the feeds on offer. Straw has an energy density of 6.5MJ/kg DM, good

quality hay is 8.5MJ/kg DM, poor silage 9.5MJ/kg DM and the best quality silage 11MJ/kg DM. So using this we can work out the maximum amount of energy a ewe can get from each of these feeds.

Feed source	DM intake	Energy density (MJ/kg DM)	Maximum daily energy (MJ)
Straw	1.0	6.5	6.5
Hay	1.2	8.5	10.2
Poor silage	1.3	9.5	12.4
Good silage	1.6	11	17.6

Feeding regimes for different groups:

Looking at these figures we can design diets for the different groups of ewes.

Singles:

Ewes carrying singles will usually meet their energy requirements on silage alone. If the group is in poor body condition (<2.5) then some supplementary feeding is required.

Twins:

Twin-carrying ewes may be able to meet their energy requirements if fed on the best quality silage but unless this is the case, supplementary feed should be provided. Most concentrates have an energy density of 13MJ/kg DM and have a very high DM (almost 100%) so each kg of concentrate will provide an extra 13MJ of energy. So roughly twin-carrying ewes on hay require an additional 0.75kg concentrate per head per day and if fed on good quality silage 0.25kg of concentrate should be sufficient.

Triplets:

Ewes carrying triplets will never meet their energy requirements on forage alone. Triplet

ewes on hay will require around 1kg of concentrate per day and if fed on good quality silage will still need around 0.5kg of concentrate.

The most accurate way to determine how much concentrate needs to be fed is to have your forage analysed. This will allow you to know exactly what you are feeding your ewes. The numbers above are an average and forage quality can vary wildly from year to year and even batch to batch!

Feed access:

You can formulate the best ration in the world but if your ewes cannot get to the food it will be a waste of time. Sheep should have at least 15cm of feed space each, this will allow all sheep to feed at leisure. If feeding concentrate out in the field it is important to spread it out as much as possible, this will allow subordinate ewes to feed.

Overcrowded feed space:



Good access to feed for all ewes:



Blood testing to assess nutritional status:

The best way to assess the status of ewes is to sample a random group of singles, twins and triplet bearing ewes and measure the levels of ketones in the blood. Ketones are produced when a ewe is using fat to top up her energy reserves as

the diet is not providing sufficient energy. The target is to have all ewes with a reading of less than 1. If blood sampling is done around 4-6 weeks pre-lambing it will allow sufficient time to adjust feeding as necessary. The test is easy to do and can be done on farm.

If you would like to book in a pre-lambing visit to assess your flock let us know at the practice.

All the best over the winter!

Chris

