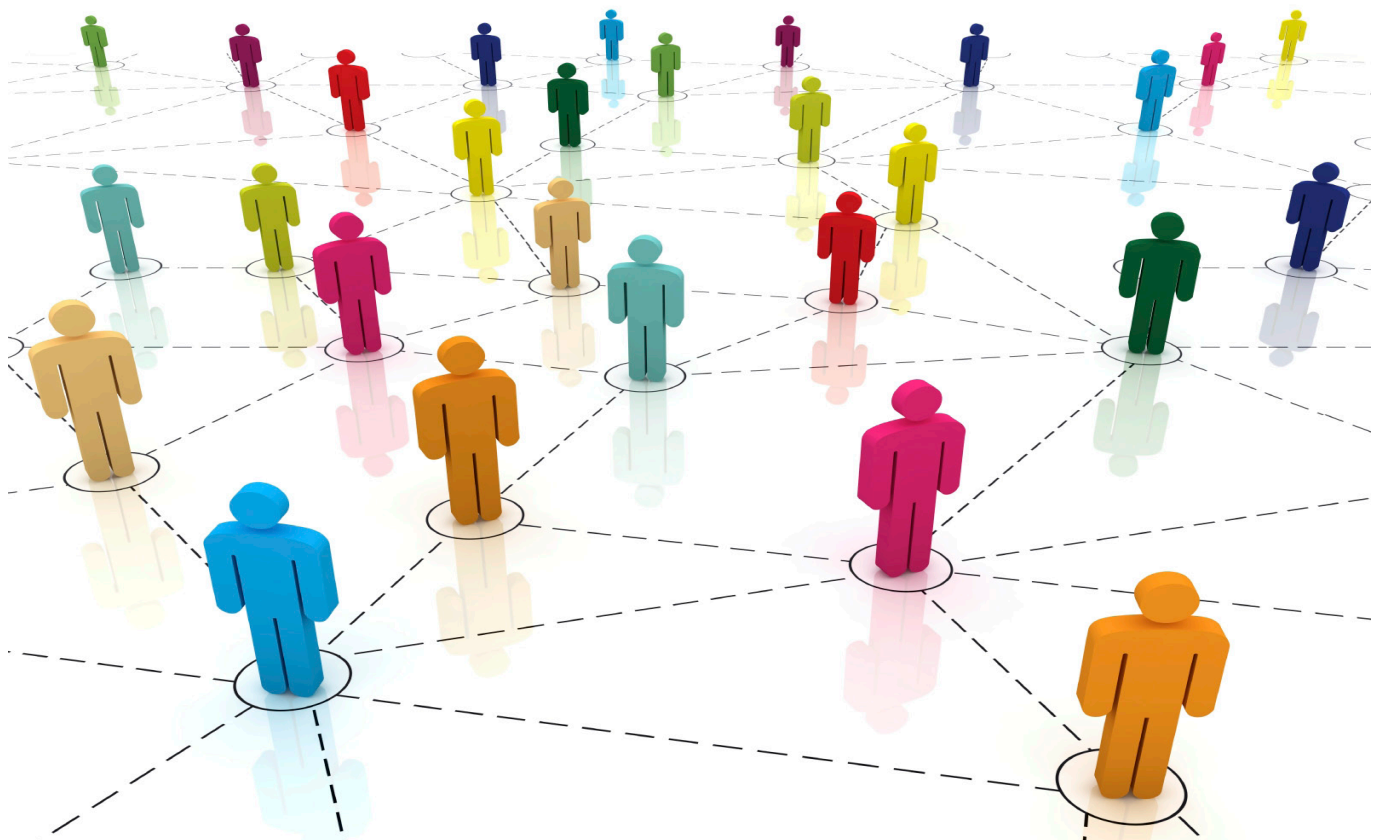


# Online Animal Nutrition Clinic Q&A

Conducted through Facebook & Twitter

With Dr. Siobhan Kavanagh, Nutrition Specialist, Teagasc





**Dr. Siobhan Kavanagh**  
Nutrition Specialist, Teagasc

# get

## EXPERT ADVICE on NUTRITION & Feeding your Livestock this Spring!

**JOIN US: Wednesday, 27 February**  
from **12.30pm - 1.30pm** for a live Q&A  
discussion on Facebook and Twitter with  
Dr. Siobhan Kavanagh, Nutrition  
Specialist with Teagasc

**HOW:** Use hashtag **#teagasc** or post  
your questions to our Facebook wall on  
the day!

**Plus:** Six prizes to be given away on the day to  
best questions!



Teagasc held their first live online Q&A session on Animal Nutrition through their corporate Facebook and Twitter accounts on Wednesday, 27 February. This online clinic was made possible with Dr. Siobhan Kavanagh, Nutrition Specialist providing detailed answers to 29 questions we received.

The following questions were answered:

### **How do we get cows in poor BCS ready for the breeding season?**

If cows have reached the point of calving and are in poor condition, this cannot be reversed before the breeding season but there are a number of things we can do to give cows every chance of going back in calf:

Good nutrition at calving to avoid calving problems and problems like milk fever, retained cleanings, ketosis etc. will be critically important to give the cow

every chance of going back in calf. Make sure that cows are in positive energy coming up to calving to avoid calving problems which can subsequently make it harder to get cows back in calf. This means that if cows are in poor condition and/or on bad silage, feed 2-3 kg meals up to calving (This will not cause calving problems which is sometimes suggested). We are seeing a lot of recumbent cows and the primary cause of this is cows not getting enough energy in pre-calving.

Avoid stress on animals at calving and

feed adequate pre-calver minerals.

Nutrition after calving to limit further BC loss will be important. Energy is the most important mineral to get into cows after calving, when in poor condition. Making sure there is adequate energy in the diet i.e. match meal feeding rates to grass / silage intake, avoid overfeeding protein and feeding full minerals.

Consider once-a-day milking in early lactation but its important that cows are still adequately fed so that they can meet their energy requirements from feed and not off their backs. This does not mean feeding the whole herd once a day but pulling out the thin cows and putting them on once a day. These should be cows of low SCC before going on once a day.

### **What are the needs of a 750 kg cow suckling a 2 mth calf to ensure milk and getting back incalf eating 55DMD silage?**

If that cow is being bred on 55 DMD, there will be a high requirement for meals to maintain the calf

and ensure that she is in positive energy balance for breeding. 55 DMD is not much better than a moderate quality hay and is significantly deficient in energy. Protein is also low in the silage and the cow needs protein to produce milk. Under stress with bad silage, minerals are important.

With silage, if animals are being bred on silage, consider buying in a silage of better quality or more importantly get them to grass to increase energy intake and reduce meals costs

If cows are in good condition and will get to grass within 1 month and breeding at grass feed 2-3 kg meals up to turnout, if turnout is 6 weeks or greater - feed 3-4 kg meals. If cow condition is poor, meal feeding rates will need to be increased by 1-1.5 kg.

These meal feeding levels are not sustainable in a beef system so its preferable that animals get grass in the diet as soon as possible to reduce meal feeding rates and help get them back in calf. Its

important hat the cow is getting minerals on this silage. For breeding the most important minerals are phosphorus, copper, selenium & iodine.

### **What's the best way to help avoid lazy cows during calving, cows on silage & 1/2kg straw & precalver minerals?**

This sounds like it could be a sub clinical milk fever problem. This can be caused by:

Overfat cows

Excessive potassium levels in the silage – a lot of slurry going on silage ground

Inadequate magnesium supplementation – your precalver is probably supplying 15 g of magnesium. I would feed an additional 30 grams of sweetened calmag along with your pre-calver mineral.

### **How do you rate seaweed as a natural mineral supplement?**

When feeding any mineral mix, its important to know what minerals are needed by the animal and

ensure that the mineral mix used is meeting the animals requirements. Seaweed minerals tend to be high in iodine but its important that the requirements of the animal for other minerals is also met in the mix. I would be more concerned about the individual mineral inclusion in the mix (i.e. major & trace element - selenium, iodine etc) rather than the source of the minerals.

### **What is the best value fodder or meal to buy to extend dry cow's feed if silage is running low?**

65 DMD silage is worth approx. €25-28 / bale, when meals are approx. €320 / tonne but the problem is that silage is often of unknown quality.

I would be slow to make major changes to the cows diet is the last few weeks pre-calving so changing those from full silage to restricted silage + meals is not ideal. But certainly the late calving cows could be put on restricted silage + meals – if short 25% of the silage you need that's ~ 2 kg meals. If you are short 50% if 3-4 kg meals.

Consider also restricting the young stock on the farm such as weanlings. If you still have cull cows, its time to finish them, possibly on high meals.

You need adequate feeding space if feeding restricted silage + meals.

### **Is it better to feed whole or rolled barley to ewes before lambing?**

There is no issue with feeding whole or rolled barley to ewes pre-lambing. A few things to remember

If you have exceptionally good silage, its better to roll some of it, otherwise the retention in the rumen is too short and the ewe does not get the full feeding value out of the silage

If feeding minerals with the barley, its preferable to not feed all whole barley because the minerals will not stay mixed in the ration

If feeding very high levels of barley, its probably best to feed to a mix of whole & rolled

### **Which is the most important element in ewes running up to lambing time energy or protein?**

Both are important pre-lambing, particularly in a year when silage quality is poor, the energy levels are low in it and the intake potential is also low as well as protein being low. If your silage quality is back 5-10 units of DMD compared to last year, expect to feed 0.3-0.6 kg more meals to ewes pre-lambing. Ewes need to be getting 200 grams of protein pre-lambing, For most this will mean feeding an 18-20% CP ration. Also don't forget a good mineral mix in the blend

**Ewes fed 14% protein ration plus rolled barley mixed 30/70 respectively including minerals 8 weeks prior to lambing. 2 weeks before lambing soya was introduced increasing the protein content to 18% and rolled barley amount was halved and ewe and lamb nuts introduced. This was fed while ewes were on bare ground and fed no hay, straw, silage, citrus / beet pulp. There were 3**



**incidents of prolapse in ewe hoggots and none in older ewes, is it something with the nutritional content of the feed that is causing the ewe hoggots to experience prolapse and not the older ewes? Am I lucky to have no incidents of acidosis when no fibre is included or could this be a possible cause of prolapse in hoggots.**

There are so many potential causes of prolapse and its something that is quite hard to pin down. In relation to your own case, there are a few things you might look at:

The fact that animals are on bare ground might suggest that they are relying on practically all ration, which means they may not be getting feed regularly enough and are then gorging themselves when they get ration. This is putting a physical pressure on them

Consider splitting the feeds into 3 times a day.

Is there adequate feeding space?

There is a risk of acidosis when they are getting no

roughage but its unlikely that this in itself will cause prolapse.

**I feed some 5kg of beef nuts to my cattle daily. I have a plentiful supply of high quality, locally produced barley. Can you tell me if there is anything I could add to this barley to create a substitute feed that would be nutritionally equivalent to the beef nuts? I like the idea of using local produce, but also want to ensure adequate nutrition.**

I am assuming that you are finishing cattle on silage + meals. The energy content of the barley is as good and in many cases better than a purchased beef nut. For finishing cattle 5 kg of barley + minerals + good quality silage (72 DMD) will finish them. Feed twice a day. These animals will not need a protein source, as its energy that they need to finish them.

If its young stock you are also feeding, a possible mix would be 75% barley, 22.5% rapeseed meal and 2.5% minerals. This could be fed at 2-2.5 kg feeding rate to weanlings.

**For a winter milk diet what should the lowest inclusion per kgdm of forage maize be- cut it down to 3kg/dm maize with 9kg/dm 78dmd silage @34dm% i kg soya, i kg straw i kg beet pulp and 1.4kg dm brewers as a base diet, cows then fed to yield in parlour on a 16% he nut- are the cows getting enough starch and at approx 4euro per head could you recommend a cheaper diet and get the same yield- fresh calvers averaged 45litres @ 3.4 protein.**

The base diet is enough for 21-22 litres of milk and I think this is a sensible approach to feeding a high yielding herd..... but may be a little low as a base in your case (see below) You set the base diet for the wagon low and then top up to yield. This was done in Johnstown Castle as part of the winter milk programme down there and with the feed to yield group there was a saving of over 200 kg meals or with todays prices that's over €75 / cow.

A few comments:

1. The protein is kept low

which is good and this will help keep condition on cows.

2. Are you feeding minerals as part of the base diet?

This would be important for the animals that are getting very little meals in the parlour.

3. You have 25% maize in the diet. Most of the gain from maize silage can be got from 1/3 inclusion in the diet. Given the milk yield of these cows there are likely big cows and their forage intake could be a little higher, consider increasing the maize inclusion to 33% of the forage intake and see if you get a response in intake. You have exceptionally good silage which is a big plus and will reduce the response you get to maize silage

4. The rule of thumb is 0.4 kg meals for every 1 litre above the base diet. For an additional 22 litres, that would mean an additional 9.5 kg meals. This is too much for twice a day feeding in the parlour. Max in parlour is 4 kg per feed. Perhaps you need to increase the energy level in the base diet, depending

on the average yield in the herd.

The big cost in feeding cows is the quantity of it, we can make minor changes to diet but the effect is minimal. To further reduce feed costs you might take a look at your calving pattern – are there animals being fed at €4 / day, when you don't need that milk to fill your contract. This is a common problem where more cows than are needed to fill the contract are being fed over the winter. As part of the winter milk programme it has become evident that it's the feed costs at the shoulders of the year that create the big difference between high cost and medium feed costs.

**If a bull is running with 40 sucklers and I want to throw some dairy nuts to the cows to prevent grass tetany and bring them into heat quicker..will the dairy nuts affect the bulls libido in any way?**

If the cows are at grass, I would question the need to feed ration unless they are being bred indoors on silage. Male animals should not get minerals

will magnesium added to it. Magnesium can cause urinary problems in male animals. Its probably preferable that the bull is not eating the ration with a high level of magnesium in it as it can cause urinary problems in males – urolithiasis – its basically a build up of minerals (esp magnesium) in the urinary tract which affects the passing of water. Bigger issue if not consuming enough water. This may upset the bull and possibly his libido also.

**What are the most important minerals to feed a cow that is near calving?**

The important minerals precalving are important for cow and calf health. The important minerals are:

Magnesium – important for milk fever – clinical and sub clinical

Trace elements – copper, selenium, iodine, cobalt, zinc and manganese

Vitamins – particularly Vitamin E

**Considerable variation in RFI (residual feed intake) exists among individual animals within breeds or genetic strains. This variation suggests that substantial progress can be made in RFI since the heritability of the trait is about 40 per cent. What advice would Siobhan give on reducing RFI in bull beef finishing systems?**

Yes, there is considerable variation in RFI but the challenge is to reliably identify the efficient animals. [Measuring feed efficiency is very costly hence all talk about markers for the trait].

There is a breed ranking for RFI with late-maturing breeds being more efficient than early-maturing breeds. Theoretically, one can generate breeding values for RFI (but with LOW reliability) using Tully data and select/identify animals accordingly. Alternatively, one could try and identify/select animals on the basis of the individual sub-components of our breeding indexes – intake, weight, growth.

What makes RFI particularly useful is that

it is independent of body size and production i.e. broadly, it quantifies the variation in feed intake that is unrelated to weight and growth. It's important to remember that the main advantage of RFI over conventional measures of feed efficiency (FCR, FCE) is in the breeding herd – i.e. can select for feed efficient animals without increasing mature size. [We are NOT advocating single-trait breeding selection but the components of RFI can be incorporated into multiple trait selection programmes].

In finishing cattle of similar weight, practically FCR is probably as useful as RFI (phenotypically).

**The terrible weather last summer has resulted in very poor silage across the country. Has Teagasc come across a lot of mycotoxin problems and is there anything that can be done on the nutrition side to help combat the effects of mycotoxins?**

We have not come across specific problems with mycotoxins in silage this winter and it can be difficult to define the extent of the problem

as the analysis is very expensive and its difficult to define what toxin might be present. If you have a production problem and you think it might be nutrition related, check all other aspects of feeds – silage DMD, energy, protein & mineral intake, feeding management etc. Pit management needs to be excellent to reduce the risk of heating and proliferation of mycotoxins.

If all has been exhausted, consider the use of a mycotoxin binder rather than trying to analysis the forage for mycotoxins. If the problem is mycotoxins, the binder will bind the toxin and ensure its not absorbed into the animal – you should see a response quickly if toxins are a problem.

From a silage making perspective, avoid pit silage being more than 30% DM. Above 30% DM, aerobic stability in the pit becomes an issue and the risk of mycotoxins arising is greater.

**What would you recommend feeding pedigree bulls? What is the best ration with the best results?**

In feeding pedigree bulls you want to achieve a good frame on the animal and flesh them up at the same time.

Protein levels needed for growth are approximately 14% CP in the complete diet. Lower than this and there is a risk that animals will stay small and stumpy and not grow a good frame.

Energy levels should be sustained high in the ration. Target energy density in the ration of 0.93-0.94 UFV.

This means using good quality ingredients such as your cereals, maize, pulps and protein sources such as distillers grains and rapeseed meal. Soya only if its competitively priced.

Minerals are important. These animals are growing fast and its important that they have adequate Ca & P to build a frame and trace elements like Zinc for hoof hardness. There is the risk if feeding your own

high level of cereals that calcium levels may not be adequate – its important to check this.

**What's the ideal minerals and nutritional balance to watch for when buying dairy nuts for freshly calved high yielding holstein dairy cows that have good condition and will be breeding 10th of April on grass fulltime since sat week and how many kg should I feed I want yield/solids plus get them in calf and hold condition?**

You are interested in energy, protein and minerals in the ration

- Target energy density of 0.93-0.94 / kg as fed for feeding rates of 3kg+
- Protein level will depend on grass intake, if no grass in the diet, just grass silage feed an 18-20% CP. If some grass in the diet feed a 16% CP. If all grass 14% CP

Minerals – cows should get a full complement of minerals until mid April. For the breeding season the minerals of importance are phos, copper, selenium, iodine. And of course

magnesium is important for tetany.

Feeding rates of ration

This will depend on grass intake and forage quality.

Fulltime indoors on 65 DMD silage ~ 6.5-7.0 kg meals for herd average 22 litres, increase by 0.4 kg for every litre above that

Grass for 3-4 hrs, feed 5-5.5 kg meals for herd average 22 litres

Grass from morning to evening milking – 3-4 kg meals + silage by night for 22 litres, increase as above for higher yielders, particularly early calving compact herds

**We are hoping to turn out our late March calving Limousin/ British Friesian heifers to grass in the coming weeks, we have tried to keep them all at BCS 3, other than a High Mag bucket do you recommend anything else we should supplement when they go to grass? Secondly, 2 heifers are particularly heavy in calf with suspected twins and on closer examination last week we noticed they**



**are still quite thin despite our best efforts... They are both about a month off calving should we hold them back and keep feeding them or will that just leave us with huge calves are a still thin cow?**

For heifers that are going to the bull in the coming weeks: once at grass, on good grass they have a capacity to do a high rate of gain (over 1.2 kg gain) at grass and if you supplement with meals you will be simply substituting grass for meals so there will be no advantage. Getting them out quickly will be important. Minerals is really all they need at this stage.

If they are within a month of calving, they won't put on condition at this stage but it would be important to ensure that they don't lose any more condition and be weak at calving... causing calving problems etc. If your silage quality is very poor, feeding 1-2 kg meals will simply replace what good silage would have done for you on its own other years. The meal will not fatten them but will replace the lower dry matter and energy

intake that the bad silage cannot supply this year. The energy demand of the calf at this stage is very high and you need to feed enough to sustain that without making them over big.

Supplement with some protein as part of the ration, if silage quality is poor, protein could also be limiting. Keep a very close eye on condition. We are seeing a lot of recumbent cows due to a lack of energy feeding pre-calving.

**We save our own barley to feed to finishing heifers and weanlings. We mix it along with a barley balancer and minerals and we get a 14% ration. With the high price of soya and other protein feed stuffs is there any alternative crop that can be grown to provide a protein source to replace the balancer?**

We have been quite unsuccessful in growing protein feeds in this country unfortunately. We have had some success with beans but poorly with lupins and peas. If you were to grow your own protein, it would be beans but the yield is a

major issue and after that processing and storage.

**I am feeding both my ewes and cows lifeline mineral buckets all winter and have noticed that recently they have increased the consumption of them quite a lot. All cows are injected for copper, iodine bolus bullets and sheep are wormed, injected against fluke and receive a pre-lambing mineral supplement 6 weeks prior to lambing and receive a 18% protein ewe & lamb nut. I am just wondering why the sudden need to increase consumption of the mineral blocks and should I try different ones?**

It's unlikely that it's a shortage of minerals but you would need to get the spec checked vs sheep demand to be sure of that. Be careful that you are not feeding too much minerals, too much can be as bad as too little. You are getting minerals in the buckets, injections and a pre-lambing mineral and minerals in the ration. You could potentially be feeding too much and causing imbalances. Also, it could be a lack of energy in their

diet that they are after the molasses. We have noticed this with incalf heifers this winter when they are on poor silage and probably not getting enough meals to balance the silage...

**For pedigree stock would cooked rations be better than ordinary rations?**

I think the energy density of the ration is 1st limiting and whether cooked or not will not greatly impact on that. Cooked cereals is useful for young calf rations but of more limited value on older stock rations. Hope this helps

**Range Rover asked: Is barley and soya sufficient to finish cattle with ad lib silage. 70% dmd. They don't seem to be doing as good this year as other years?**

Yes barley + soya + 70 DMD silage should finish cattle. But a few things to check:

- 1) Have you the silage analysed, is it actually 70 DMD?
- 2) What feeding rate are you at? You should be feeding 5.5 kg meals with 70 DMD silage for 1.0 kg LW

gain

- 3) Are you feeding minerals?
- 4) Have you dosed for fluke? – worth taking a few dung samples and checking for rumen fluke
- 5) Is space allowance adequate?
- 6) Adequate water supply?
- 7) Ventilation in the shed?

**I was going to grow magnum fodder beet this season, will this need as much balancer as maize for my beef cattle? I was hoping to feed up to 20-25 kg of magnum to finishers?**

Magnum fodder beet is lower in crude protein and lower DM than maize silage so it will need slightly more protein to balance it up. Assuming you are feeding 25 kg FB plus ad lib silage, you will need 1.1 kg soya + minerals OR 2.0 kg rapeseed meal + minerals OR 3.4 kg of a 25% CP balancer.

**With cows and heifers bulling but no signs they got my scanning in to find out all are in heat but none of them were mounting. Its not a case that they don't get minerals as they gave them all sure boluses and 2.5/ 3 kgs meal per day with minerals in meal.**

A few things to check:

1. Meal feeding rate looks fine
2. Check mineral intake – iodine in particular 15 mg / day under normal circumstances, up to 60 mg/day if severely deficient, Se 3-5 mg/day, copper 150-450 mg/d.
3. Is there a disease problem on the farm
4. What is cow condition like?
5. Have you had problems with cows calving i.e. milk fever, slow calvings etc. This may also contribute with cows not showing heat
6. Be careful not to overfeed minerals

**Is there any advantage to the use of UFL as a measurement of energy over MJ/kg DM?**

Yes, UFL is a more accurate measure of the energy available to the animal, particularly for low energy feeds.

OP: Ah I see. Is there any conversion factor? As the UK uses MJ's and I use trafford but the documentation on cow feeding is in UFLs. In particular I'm looking for MJ's for early lactation 5-6000 litre cows and late lactation.

Unfortunately there is no easy conversion from one to the other. I would assume the Trafford has a UFL of 1.05 / kg DM. The UFL requirements are then 5 for maintenance, increase maintenance requirement by 10-20% for exercise (depending on whether indoors or outdoors), approx., 0.43 UFL / litre milk, and 4.5 UFL / kg LW gain, foetal growth is 0.7, 1.6 and 2.6 UFL for months 7, 8 & 9 of pregnancy.

**Is soya bean meal and oats sufficient to feed to ewes in the run up to**

**lambing at 18% crude protein.**

Yes, but will need minerals too

**Planning on purchasing a small group of cull cows as a trail and use them to give birth to some of my pedigree stock at the farm. Some of these cows will be having twins and will be recipients after flushing some of my high index cows and implanting the embryos (MOET). The expert advice I need to know before this research is undertaken, is number 1: what precautionary measures should I take during the course of the pregnancy so I don't have a high fatality rate at the farm and number 2: during the 7 weeks before pregnancy (rising plane of nutrition stage) what should I feed to these cows in terms of nutrition as the chances is they might need a caesarean section...Once calved, cows will be fed on an intensive 60 day finishing diet before slaughter and will be separated from the calves, while the calves will be fostered.**

I assume its embryo mortality rate and really it's a case of 'steady as she goes' – just ensure that there are no major dietary upsets particularly in the early stages after the transfer

During the 7 weeks before calving in which case he's talking about body condition score of 3.00 where the calf is the most important thing. Target a diet energy density of 0.76 UFL or 68 DMD silage + a good pre-calver mineral.

Incidentally it should also be pointed out that purchasing maiden heifers rather than cull cows is the preferred option for embryo transfers as the pregnancy rate will be in the order of 10-20% higher than with cull cows.

**Crossbred hoggets aren't putting up much of an elder how many lbs of meal each? All carrying twins due on 15 March onwards in shed with silage aswell.**

Check the meal feeding rate is right for the forage quality you are feeding. Check that the protein level in the diet is right. They

need to be getting in 200 grams of protein which is equivalent to feeding an 18-20% ration.

Silage DMD	Weeks from Lambing	
70	0.5	0.7
65	0.6	0.8
60	0.8	1.0
55	1.1	1.4

### **Is there any special ration to bring cows in heat?**

No, there is no special ration. From a nutrition perspective it's about making sure cows are at target condition score at breeding i.e. 2.75+ and on a rising plane of nutrition i.e. enough energy in the diet, avoiding fluctuations in intake. The minerals that are most important in the breeding season are phos, copper, selenium & iodine.

**My vet says that 90% of the pre-calving mineral we are feeding our dairy cows is being passed out in their manure. Is this true and if so, is this not a case of throwing your money in the slurry so to speak? Also what is the**

### **best and least wasteful method to feed minerals to cows?**

It is not the case that 90% of the pre-calver mineral is excreted by the animal. There will be some wastage if an animal is not deficient in a mineral but where there is a demand for minerals 90% of it is not passing out. I think that fixed rate feeding is the best choice rather than free access and sprinkling on top of silage is the easiest way of getting all minerals into the cow – major and trace elements



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