

VET TIPS: FOCUS ON FERTILITY



Harbro's resident vet Hugh Thomson

Much of herd fertility success originates in and around the near-dry period. With Ovum being produced around three months in advance at the ovarian level, the stresses around the point of calving can produce ovum of inferior quality. Let us not forget these are the ovum which we hope to fertilise at 80-100 days, when we REALLY want the cow to conceive for maximal lactation performance. So focus on these cows is crucial including:

- Transition cow diet and preparing the rumen for the milking cow diet
- Ensures good intakes (>15kg dry matter ideal)
- Quality, timing and presentation of feed
- Adequate lying and feed space
- Prevention of health problems such as mastitis or lameness- these increase the risk of metabolic disease
- Hydration and metabolic state of the cow should be closely monitored to ensure rumen fill post calving
- Prompt treatment of metabolic disease around calving if it cannot be avoided

Success here also results in a prompt return to oestrous (ideally seen in heat before 42 days). This natural heat before the end of the voluntary waiting period helps to clean up the uterine tissue with invasion of white blood cells resulting in a healthy uterine environment for first service.

Intervention by you and the vet should be predetermined and an agreed protocol if the animal has not been seen in heat by a certain number of days into lactation. It is worth remembering that we ideally want the cow to conceive at 80-120 days to ensure we are not losing milk at dry-off (drying off cows at 35-40kg+) or milking stale cows and losing milk at the other end. Thus, serving or intervening with cows very promptly after calving may be counterproductive.

What does work well is to agree on a period of time where the cow can express heat, ideally at least a full cycle. Even in healthy populations of cows seeing any more than 70% of cows in heat during this period is unlikely so there will be cows that WILL require intervention. What can work well is having a treatment protocol that ensures these cows are served shortly after this i.e a programme such as OVSync, ensuring cows are served 10 days after the start of treatment.

The value of natural heats remains the best option if it can be achieved. Conception rates tend to be higher than cows which are served off pharmaceutical treatments (usually around 10% although this can vary) and the increased cost of both vet time and medicines. However, the cost of Veterinary Intervention remains very cost effective as the right protocol will ensure cows not seen in heat WILL be served and also with the cost of every day a cow is not in calf still thought to be around £4/ day, prompt intervention will reduce this if conception can be achieved.



Rumen Protected Glucose

Glucose Aid is a unique energy supplement designed to by-pass the rumen and boost blood glucose levels in early lactation.

- Reduces body condition loss and improves liver function
- Cows come out of negative energy balance sooner
- Helps clean excess fat from the liver to improve liver efficiency and animal performance
- Reduced Ketosis and related fertility problems
- Cows return to a positive energy balance sooner and return to heat quicker

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Milk Matters

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ACHIEVING THE TARGET 'RUMEN RATE'

We often take for granted the amazing job done by the dairy cow in converting feedstuffs unsuitable for human use into milk, arguably the most important food in human nutrition. That ability to convert grass, silage, straw, distillers by product, rape and soya residues following oil extraction and fibrous products left after sugar and flour production into the highest quality human food relies on one thing, the rumen.

Rumen fermentation is fundamental to the conversion of forage and fibrous by-products into milk components. This fermentation relies on a sensitive ecosystem of yeasts, bacteria and other organisms to break down the complex fibres which would otherwise prevent digestion in a non-ruminant animal. The ration you feed has a direct impact on the microbial population in the rumen, and the composition of that ration has a huge bearing on the speed and efficiency of digestion.

A healthy, active rumen creates another benefit besides forage digestion; the microbes grown in the rumen are constantly washed through into the intestine and make up the most important source of protein to the dairy cow. And so, improving rumen function leads not only to a greater energy release, but a significant increase in the apparent supply of high quality protein.

Many of our producers have been involved

with a recent Harbro initiative to monitor the efficiency conversion of feed into milk and milk components.

To ensure we retain our focus on the importance of the rumen in this conversion we refer to the final efficiency score as a 'Rumen Rate'. The target 'Rumen Rate' is around 1.5kg milk per kg dry matter fed; below this figure suggests that the rumen may not be as efficient as target; above this figure suggests intake may not be sufficient to cover output, and cow condition may be suffering.

The results of our initial surveys have been fascinating, with a range of figures from 1kg milk per kg DM up to 1.7kg per kg DM.

There are indications that many farms are running well below target rumen efficiency. This might be for a variety of reasons; stage of lactation, forage quality, health etc. Ration make-up, however, has to be one of the key factors requiring investigation and we need to ensure that the rumen

environment is optimised to balance the fibre sources available on-farm. Simple changes such as the addition of molasses can have a huge impact on fermentation and hence forage digestibility. We have also been involved with some fascinating research with the Norwegian University of Life Sciences where a large trial demonstrated that feeding Maxammon grain significantly boosted fibre (and total diet) digestibility. This was directly achieved by changing rumen dynamics – and resulted in more milk being produced from each kg dry matter.

We have also had outstanding success with the additive RumiTech which reduces energy loss from methane by 5%. Feeding RumiTech has reliably improved rumen efficiency by 8-10% and is a key part of our drive to improve rumen function within our rumen friendly feed range.

If you are interested in discussing our Milk Monitor, and calculating your 'Rumen Rate', please contact your local Harbro dairy specialist or call customer services on the number overleaf.

ENERGY BOOST AND HEALTH AID HELPING ACHIEVE TARGETS AT COOPON



Alec Robertson, Farm Manager at Coopon Farms

As with the problem itself it would be too long winded to deal with all these areas at this time and more information is available if required, but at this time we are going to focus on number three - transition post calving feeding.

'With most things we tackle at Coopon we keep it fairly simple and straightforward. Our aims are to minimise cow weight change and to have a smooth transition into the milking herd.

'To facilitate this we formed a fresh calved group primarily to monitor dry matter intake in the first month and ensure that adequate intakes were being achieved early enough in the lactation, a reflection on current diet and dry cow process.' says farm manager Alec.

'In conjunction with this we decided to give the cow an energy boost and a health aid as part of the changes, and we introduced a product into the feed plan called Glucose Aid. This was done through the guidance of Harbro's independent dairy consultant Hugh Kerr to help us achieve these two goals.

'The results of our endeavours have been rewarding for the team at Coopon with many of the targets being achieved and aspirations at the outset being met.' Alec concludes.

Every day counts—up to £4 per day of potential gained margin.

Taking 20 days off your calving interval has not been seen as a priority during these austere times of low milk prices, where every effort has been made to reduce day to day feed costs and maintain some semblance of cash flow on our business accounts.

The calving interval has been belittled on two major fronts;

1. It has been manipulated and mistrusted as the figures can be massaged to suit a story and by replacing problem cows, or having a high wastage rate from weak management systems, we can maintain a respectable benchmark number which allows us to sleep at night, but at what cost to overall herd profit?

2. The second illusion we use to take the sting out of this benchmark figure is the willingness to milk that we have bred into the genetics we use. Cows have no problem milking for a long lactation and maintaining a high level production well beyond the old lactation length we have used for years.

These two factors combined, allow us the luxury of accepting intervals between calves well in excess of 400 days and taking these as the norm.

But at what cost?

This was the situation at Coopon Farms in South West Scotland and two years ago the farm manager Alec Robertson decided that the financial negatives of this endemic acceptance of a high calving interval needed to be brought under the microscope.

As with all dairy cow projects, they are never single dimensional and the problem needs addressing from several different fronts and choosing the actions that will give you the biggest bang for your buck is a skill set all on its own.

The areas that were chosen at Coopon were;

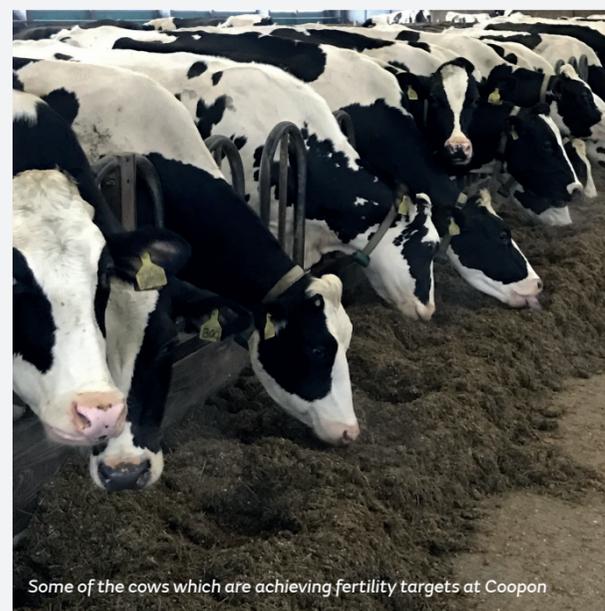
1. Dry cow feeding
2. Protocol for problem breeders
3. Transition post calving feeding

More young stock at Coopon are now in system and annual milk sales have increased from the same number of cows.

A work in progress.

	December 2014	December 2016
Calving Interval (days)	400	380
Milk Production (litres)	10200	10700

Table showing the results compared to 2014 herd performance



Some of the cows which are achieving fertility targets at Coopon

DENDOLDRUM DIARY

Our columnist Gregor Colquhoun reports from Dendoldrum, Montrose



to start genomic testing to all heifer calves so we can breed from the best and we use beef semen on the bottom 25%. On top of this selection process for using beef semen any heifers with poor growth rates will also get beef semen. You would imagine there might be a correlation between the poor genomic tested heifers and growth rates.

Meanwhile, life indoors is never dull. The girls continue to leave us in stitches on a daily basis. Last night, Orla told Faye that she needed to have a bath as underneath her eyes were black! This clearly has nothing to do with Orla waking her every day at 5am just to see if it is time to get up yet – and then re-checking every 10 minutes till she is finally allowed out of her bed at 7am. Faye got a treat the other day though, Lexie proudly announced that she had organised her breakfast in bed. All excited, Faye peered over the covers to find Lexie standing with a banana and a Curly Wurly – very nutritious!!

'You would hardly think it is February with the way the weather has been.

I went to the Semex Conference this year, the first time for about 15 years, it was an excellent conference albeit a little tiring due to some great crack and self abuse in the bar at night. As you might expect the mood was upbeat although a few themes I picked up on through the conference were:

1. Volatility

Going forward we are going to have to learn to live with this. Nobody can predict the milk price going forward. There was talk of a future milk market, better communication right across the supply chain and saving some cash in the good years for the inevitable bad years ahead.

2. Technology

The farms that adopt and adapt and are open to change will be best equipped to survive. People must embrace technology to improve technical efficiency. For example activity collars to improve heat detection and rumination to monitor health. I am sure we will soon have daily recordings of animal temperatures from these collars or an ear tag.

3. Antimicrobial Resistance (AMR)

We are going to have to reduce antibiotic use and virtually stop using third and fourth generation antibiotics. At home we often jag with an antibiotic as a precaution when a cow is not right. This will have to stop. We will have to take her temperature and if normal only give her pain relief. We have

been doing selective dry cow therapy (SDCT) for over a year with only 15% of cows now getting an antibiotic dry cow tube. If we got more for our milk we could justify dropping stocking rates, investing to improve animal comfort, ventilation etc. Breeding plays a role too. At home we are a lot more focused on breeding for health traits and longevity now.

4. Labour

The lack of skilled labour on farms is a concern. This is another reason technology is so vital. If it was not for foreign labour at home I don't know if we would still be in dairying. Brexit could be a threat to the availability of foreign labour.

At home cows have been milking well. Over the last year we have dropped a tonne of concentrate and are relying on getting more milk from forage. This is working well for us and weather depending I will look to cut grass silage every 35 days this summer. I think cutting little and often we have more silage in the clamps.

Butterfat levels were poor at the start of the winter but have increased as the winter has progressed. We are still relatively low at 3.72% but that is good for us.

We use too much antibiotics in our calves up to three months. Because of this and the pressure on us to reduce antibiotic use we are looking to improve ventilation. I want to start weighing youngstock to monitor growth rates, but it is finding the time and a system that makes it simple. We also plan



On farm event at Panlands Farm

Leading the way in embracing innovation and improving profitability

We recently held an on farm meeting in Dumfries & Galloway where Harbro dairy specialists explained why it is important to maximise home-grown forages.

- Select out the correct Pioneer forage additive to use depending on target dry matter %
- Improve your cheapest home grown feeds – embrace Pioneer best practice to improve silage quality, use Pioneer a specialist additive on your forages and Maxammon treat your cereals to improve rumen health
- Embrace new innovations in the market place – Rumitech increases energy from feeds by 10%, Maxammon increases fibre digestion and improves rumen health (independent University led studies)

Call Harbro to discuss how you refocus on getting more milk from home grown feeds rather than imported straights. Our Rumen Friendly Rationing programme is also available to help combat performance issues related to acidosis risk