



## GETTING READY FOR WINTER

AVOID DIPS IN PRODUCTION AND FERTILITY WITH A PLANNED APPROACH TO THE TRANSITION TO AUTUMN / WINTER DIETS...

The transition from summer grazing to winter housing is often a time when milk production drops temporarily and this can have a knock-on effect on production and fertility throughout the winter. James Ambrose, Phileo Lesaffre Commercial and Technical Manager GB, outlines how to avoid this problem and how to get the best from forage this winter.

Housing dairy cows in the autumn results in a change in environment, social group and diet, and can place cows under significant stress if it isn't managed carefully. From a nutritional point of view, the change in diet can be dramatic – from a grazing-based diet with supplementary compound feed, and/or a buffer feed, to a full winter ration – and imposes major change on rumen function as the billions of microbes in the rumen have to adapt.

It is worth remembering that the rumen is the engine room of the dairy cow, and it is these rumen microbes that digest and ferment feed, allowing the cow to utilise the energy and microbial protein end products created as a result – which is similar in principal to an anaerobic digester for electricity generation. In effect, when we feed dairy cows we feed these bugs so that they can, in turn, feed the cow – they produce up to 80% of the protein requirements and approximately 70% of the energy requirements. It is, therefore, imperative that we treat them with respect when we formulate and feed diets to herds and, in particular, when we manage feed changes, as rapid changes decrease the efficiency with which the rumen operates.

Change to new diets gradually over 2-3 weeks...

During the dietary changes experienced during housing, the rumen microbes have to adjust and this can take up to three weeks for the bugs to sufficiently change in population size and activity to adequately digest the new diet. Herds are at risk of developing digestive upsets such as rumen acidosis leading to poor rumen function, reduced intakes, lower milk solids yield and, potentially, lower conception rates where this transition takes place too rapidly. Ideally, herds should be transitioned on to the indoor diet over a 2- 3 week period – out by day grazing and in by night for two weeks. What is critical is that this period of diet change is planned – it's not simply a case of housing cows once the weather turns nasty.

Consistency is king...

Now is a good time to get your mixer wagon serviced and get the blades checked, adjusted and replaced if necessary. Then check whether the mix consistency remains the same right throughout the mix by comparing the ration fed out at the start and end of unloading.

In addition, have your mixer wagon weigh cells calibrated to ensure that you are actually feeding the ration you think you are. The aim is to feed the same diet where possible day in, day out.

It is important to avoid overloading the mixer wagon and don't over mix/chop the ration – it can cause nutritional problems and also wastes fuel. Aim for a mixed ration of around 45% dry matter, with forages chopped to around 2.5 - 10cm (muzzle width) to minimise sorting and maximise intakes. It is also important to load the mixer wagon in the correct order, starting with forages.

Try to minimise changes to the diet through the winter – agreeing raw material contracts for the whole of the winter period can help with this as it avoids the need for ration changes due to feed stocks running out.

#### Monitor cows carefully...

Do everything in your power to promote good intakes. Aim for a stocking rate in cubicles of around 85% and ensure that at least 9cm linear per cow of water trough space is available, and that troughs are kept clean. Trough size and water flow rates are also critical factors, as milk is composed of 87% water.

Ensure buildings are well ventilated and lighting is adequate both in terms of brightness and duration.

Feed space should be at least 60cm per cow and watch for neck rubbing to establish whether the head rail position is limiting intake. It may need to be up to as much as 75 cm for cows immediately pre- and post-calving.

Also check for rumen fill (look at the triangular area on the left hand side of the cow under the hook bone) and monitor dung consistency and fibre digestion, as well as the quantity of whole grains in the dung.

#### Know what you are feeding...

It sounds obvious but it is impossible to effectively ration cows if you don't know the nutritional value of the feeds you have available to you. Get forages analysed and take new samples for analysis as the winter progresses.

Grass silage is the predominant forage in UK dairy systems and the performance of this year's first cuts will play a big bearing on the profitability of many producers through the winter, particularly with rising compound feed prices being driven by higher protein prices this autumn.

On average UK 2016 first cut silage samples show:

- Higher dry matter than last year, with slightly higher crude protein content.
- Average ME levels are down and there are fewer high ME (>11.5 MJ ME/KG DM) samples about.
- A 3% increase in NDF levels – reflective of the longer growing season and cold spring – more fibre for the rumen bugs to digest
- Fibre is more digestible and lower levels of rapidly fermentable sugars means samples should provide good rumen health
- Higher pH and lower lactic acid levels

(Source: Trouw Nutrition)

Of course, there is a massive range in silage results, and every farm is different, so it is critical that you analyse your own forage.

But, based on average results, it points to 2016 silages being better than 2015 silages for milk butterfat and rumen pH and

health due to a slower digestion and fermentation and less acid-loading in the rumen.

This year's silage will, however, require more digestion by rumen microbes to fully digest it and unleash the energy stored in the structural cell walls of the silage. What this means is that we need to focus on maximising digestion of these silages to produce more milk from forage.

It will also be important to look at the choice of cereal to be included in compounds and blends to match up the degradation rate of the starch contained within the cereal to the silage, based on its fibre content (NDF) in the clamp.

#### How Actisaf can help...

Adding Actisaf live yeast to your ration homogenises and stabilises the beneficial microbial population in the rumen, particularly the fibre-digesting bugs and those that naturally buffer the rumen and create more glucose pre-cursor from lactate acid.

This results in enhanced rumen function and more energy extracted from forage, which will support higher levels of milk production and milk solids yield throughout the winter.

Feeding Actisaf therefore helps to ease the transition between different diets which is inherent with the change to winter rations, minimising potential drops in milk production and potential blips in fertility that can arise as a result of digestive upsets at this time.

What's particularly pertinent this year, with more fibrous, higher NDF silages being typical, is that peer reviewed research has shown that Actisaf promotes increased NDF digestibility in the rumen by up to 7 per cent compared with using sodium bicarbonate as a buffer, and up to 12 per cent compared to a control diet with no rumen buffers, resulting in more milk from forage, something that is crucial under current milk prices.

## SUMMARY

- Ease transition to winter rations over 2-3 weeks;
- Service and calibrate mixer wagon and avoid overloading and over mixing;
- Monitor cows carefully to maximise intake;
- Analyse forages so you know what you have and can balance the ration;
- Work with your nutritionist to source the most cost effective raw materials;
- Formulate compound feeds and blends based on your silage analysis;
- Add Actisaf live yeast to your ration to condition rumen bugs for optimal performance during diet transition and ensure that higher NDF forages (more fibrous forages) are more thoroughly digested.



# ACTISAF IMPROVES RUMEN FUNCTION AND MILK PRODUCTION...

Brother and sister, Nigel Williams and Joy Smith, farm in partnership with their mother Moira at Parcymarl Farm, near Llysyfran, in Pembrokeshire. The farm consists of 450 acres, milking 200 Friesian type dairy cows, together with a beef cattle enterprise. The dairy herd is managed with an emphasis on milk from forage, with current herd yields between 7,800 and 8,000 litres, gaining 4,200 from forage.

The family make all their own silage with high quality results - an average 30% dry matter, 11.3 ME and 15.5 protein - and they are aware how quality can be affected and so sample regularly to give them the most up to date information.

"Weather can affect both grass and silage quality so much," explains Joy. "A week late in cutting first cut can have a huge effect on quality and a few days of dull wet weather will affect grazed grass quality. We need to have complementing feeds that will provide consistency when the cows require it."

Nigel and Joy had grown a lot of whole crop wheat in the past but they have moved to producing more crimped barley, and this year they harvested 30 acres.

"We grow barley for crimping as a good source of starch, and as we outwinter some cattle it allows us to harvest earlier and establish a crop of forage rape," Nigel explains. "We try to make good quality grass silage and began to realise that while wholecrop does complement the diet, and proves useful for periods such as turnout - when cows face quick growing new grass - we didn't need as much of it as we were growing.

"With barley we also benefit from the straw; reducing what we have to buy in," he explains.

Last winter Nigel and Joy had an issue with the crimped barley, which resulted in them seeing a large amount of undigested grain coming through in the cows' dung.

"It's incredibly frustrating to see grains passing through the cow in such high quantities," says Nigel. "You've taken the effort and expense to grow the crop and you know it's being wasted. While washing down the parlour you could see the grains in the dung. I sieved the cow's dung and found upwards of 80 grains in each pat. The cows' dung looked loose and almost fizzy in appearance, which suggested the cows might be suffering from acidosis - you

could certainly tell that something was not right in the rumen."

Mathew Van Dijk, from Bibby's, who works with the family, suggested putting Actisaf live yeast into the diet.

"I'd seen other farms use Actisaf to help improve rumen function and thought it could make a real difference at Parcymarl Farm," says Mathew. "Keeping the bugs in the rumen healthy is key to rumen function and production, whatever system you are running.

"Rumen microbes require a low oxygen environment and for pH to be kept between 6.0 and 7.0 for optimum feed digestion. Actisaf live yeast works by using up oxygen in the rumen, which results in the growth of fibre-digesting bacteria and lactate-utilising bacteria, increasing feed digestion and stabilising rumen pH."

Nigel and Joy used Actisaf live yeast in a Farm Pack and added 50g/head of Actisaf Farm Pack to the diet.

"By adding it in the feeder wagon they could make sure all cattle were receiving the correct amount, without having to worry about the amount of cake they were getting," explains Mathew. "By consuming oxygen in the rumen Actisaf live yeast helped the microbes in the rumen that digest the crimped barley become more efficient, resulting in more utilisation of the grain as well as of the home-grown forage."

As well as seeing a large reduction in the amount of barley grains passing through the cows, and the consistency of the dung improving, after including Actisaf live yeast in the diet, Joy and Nigel also saw butterfats increase. This can be attributed to the improvement in fibre digestion that Actisaf delivers by supporting fibre-digesting bacteria in the rumen. "We continued using Actisaf through the mid-grazing season, when we've stopped feeding the wholecrop wheat but the grass is still relatively young and it helped ease through that diet transition and stabilised milk fats," Mathew explains.

"Before we did anything we sat down and calculated the financial benefit of adding Actisaf to the diet. It works out at a cost of about 7p/cow/day, but the cost is well worth it. We know the rumen is performing better, which benefits milk production and constituents, and has a knock on effect on fertility and health issues."

# ACTISAF BOOSTS HERD PERFORMANCE



Drumshanny Farm is located close to the county town of Monaghan and is home to Trevor and Lynne Williamson's red and white holstein dairy herd.

Trevor's dairy enterprise has been disrupted this summer with some animals recently testing positive for TB, but he usually milks 60 cows with around 100 followers, run across 185 acres, with one third of the herd calved in autumn and the remainder during springtime. Cows are milked twice a day and average yields stand at around 8,000 litres, with the milk going to nearby LacPatrick dairy.

"I always aim to get the herd out as soon as I can to make the most of spring grazing and our established paddock system," continues Trevor. "However, whilst we want to make the most of grass, we still supplement with concentrates to ensure good performance, long term health and optimum condition for calving."

During the winter, cows are fed home-grown grass silage, supplemented with 8-9 kg/cow of concentrate in parlour. In the spring/summer months when grazing is plentiful, this drops to around 6 kg.

"I keep all the cows on the farm young, with the majority of the milking herd being no older than third calvers," continues Trevor. "I calve approximately 100 cows a year, of which 40 are heifers. Of these, I will keep 30 of the best as replacements and then sell on all of the surplus cows and heifers."

"I only retain the best young cows in my herd that perform well in terms of milk production, efficiency and calving. I want to ensure that I am getting the best returns from everything I put into a cow."

Trevor started using Actisaf live yeast two years ago, after noticing a drop in butterfat levels during the summer.

"When butterfat levels suddenly dropped off, I consulted with Gareth Gibson from Phileo and Leslie Quinn from Corby Rock Mill, and they both suggested that I give Actisaf a go to help stabilise rumen health and improve rumen efficiency," explains Trevor. "Even though all the cows appeared healthy, looking back, there must have been some underlying problems with acidosis, because as soon as I introduced Actisaf the butterfat levels lifted back up."

Actisaf is now supplied to Trevor through Corby Rock Mill and incorporated into concentrate feed at a rate of 1 kg/tonne.

"I've also noticed reduced incidence of twisted gut [displaced abomasum] since I've been using Actisaf," said Trevor. "Previously we were seeing three to five operations a year, and since using Actisaf, we haven't had any, which has saved me a lot in lost revenue."

In 2015 Trevor's herd achieved the best calving interval level in the local Breffni Oriel Holstein Friesian Club, having dropped from 416 in 2013 to record figures of 366. "Dropping our calving interval by so much has been good news for us and I don't think that it is a coincidence that the interval has fallen over the period of time that I have started using Actisaf and seen the other benefits to cow performance," explains Trevor.

Overall, Trevor is happy with the improvement that Actisaf live yeast is making to his herd and thinks that it offers a good return on investment, despite the current low milk prices.

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