YEAST SOLUTIONS

ISSUE 19 – SPRING

ACTISAF ENHANCES HERD PERFORMANCE FROM GRAZING

Adrian O'Driscoll (pictured) has a real focus on maximising the amount of milk solids produced from grazed grass, while also ensuring he meets the nutritional requirements of his herd while grazing.

"I am happy to feed my cows in order to optimise milk solids yield, minimise body condition loss and promote good fertility, and I try to combine this with effective utilisation of my grassland swards."

Adrian runs a herd of 70 cows near Drinagh in County Cork, which is block spring calving. This year he started calving in late January and had 55 cows calved in the first three weeks, with those cows averaging 30 litres at 4.16% fat and 3.48% protein after three weeks. He aims for a 16 week breeding period each year, with the majority calving within 12 weeks, and this year 90 per cent will calve within an eight week block, so he is pretty comfortable with cow fertility performance.

"I feed cows well after calving to get them in good condition for bulling, and the cows are bulling strongly already," he explained. "I haven't turned them out to grass as yet, as I have a limited land area available to me, and if I chew it up early in the season then it impacts on grazing for the whole year."

In 2015, Adrian's herd achieved milk quality of 4.20% fat and 3.6% protein, with cows peaking at 32.5 litres/day - more than 500kg of milk solids a year, with an expectation of higher yields this year based on performance so far. Dry cows are fed a ration comprising grass silage, straw and minerals, with any cows that look a bit thin getting 1kg/head/day of a dry cow ration.

Whilst they are housed before turn-out, early lactation milking cows are fed a PMR comprising 73 DMD grass silage, 12kg of fodder beet, 2kg of a rolled barley/maize meal mix, along with 6kg of an 18 per cent crude protein nut through the parlour, which Adrian buys from Drinagh Co-op.

When cows go out to grass, usually in early March, Adrian continues to supplement them with 4-5kg/day of a nut through the parlour once they are grazing full time, although this reduces to a 14 per cent crude protein nut.

"I think it is important to keep supplementing cows at grass to maintain performance and I definitely get a yield response to the feed I give through the parlour," Adrian explained. "In wet weather I will increase the parlour feed rates to ensure adequate energy intake to sustain performance. We only average around 1 tonne of feed/cow/year, so we are not feeding a lot, but the benefits far outweigh the costs in my opinion."

One issue that Adrian has seen when grazing in the past is variable milk fat and protein levels, as well as loose dung, particularly when he gets to the second round of grazing and grass is lush and leafy.

"I was advised to try adding Actisaf live yeast to our parlour nut to help address these issues," Adrian said, "and I've been really pleased with the results."

"Cows seem to transition on to grazing better with Actisaf in the feed and milk solids are much more consistent throughout the grazing season. I've also noticed cows are much more content at grass now, with improved cudding rates and consistent yields of butterfat and protein, whereas before at times they were not as settled as I would like, even in good swards of grass, something which would go hand in hand with milk constituents dropping."

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Overall, Adrian aims to maximise the amount of milk solids he produces from grazed grass and aims to complement this with strategic feeding of nuts through the parlour and buffer feeding when required. "Our approach is to maximise the utilisation of grazed grass from the grazing platform while also endeavouring to promote good herd health and fertility. Feeding Actisaf through the parlour nuts has contributed to this, as I feel it helps keep the cows performing consistently during the grazing season."

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Robert Sims & Stephen Reade

COMBATING POOR RUMEN FUNCTION

DEVELOPMENT OF SARA

- Rapid fermentation of grass with high sugars
- Rumen pH drops below 6.0
- Sub acute rumen acidosis (SARA) develops
- The number and activity of fibre digesting bacteria is reduced
- Reduced feed digestion and energy output from rumen

High quality grazed grass lies at the heart of the 270-strong Friesian-based spring-block calving system Robert Sims runs at Holly Bank Farm, near Congleton in Cheshire. But there were a few signs that poor rumen function was affecting the cows.

"We noticed that dung was very loose and almost bubbly in appearance, and you could just tell from the way the cows stood, and even lay down, that they were a bit uncomfortable," says Robert.

"We've all had stomach ache so can appreciate how these cows felt. We were worried that the high quality forage was having an adverse effect on rumen pH, which in turn meant that cows were unable to take advantage of the high levels of protein and sugars in the grass. We wanted to find a way to stabilise and neutralise the pH to provide the right environment for the rumen microbes to do their work."

The high average rainfall, free draining land and excellent grazing management means the farm regularly produces more than 12 tonnes DM/ha, in its best paddocks. Stephen Reade, the herd manager, constantly measures, analyses and manages the grass to ensure he's putting the best forage in front of the cows.

"We start calving on February 1, and calve in a pretty tight 12-week block. We snatch the first bit of grazed grass as early as possible, putting cows out for a few hours when conditions allow, and bringing them back in when necessary," explains Stephen. "Our 23 paddocks are a priority - they all have two access points and we have a good network of tracks across the farm."

From turnout cows are buffer fed silage, depending on grass availability, and get 5.5 kg/cow of concentrate in the parlour. This drops to 4 kg as grass availability increases, and will reduce further to between 2-3 kg/cow, after magic day, and once cows have been served.

"Cows need to be trained for grazing," says Stephen. "We like to keep an edge to their appetites. Cows will go into a paddock at covers of about 2,800 – 2,900 kg of DM/ha, and remain there for three grazings, but I will return them to a paddock if we feel they haven't reached the covers we're after. The aim is for them to leave with covers at about 1,400 kg DM/ha. On average we're asking our cows to eat 16 or 17 kg of DM/day from grazing."

"We do ask a lot from our paddocks, particularly in the first round, and we may even be sacrificing a bit of milk production in this round, but I know it will set up the high quality regrowth we need on this system," Robert explains.

It was during a conversation about digestive problems linked to the high quality grass in the diet that Marshall Booth, from H J Lea Oakes, suggested using Actisaf live yeast in the cows' diet to improve rumen function.

The cows have now been fed Actisaf for a year and Robert has noticed some marked changes, particularly in their behaviour when ruminating. When concentrate levels fall to 2 kg/head after service, H J Lea Oakes incorporates a higher rate of Actisaf through the mill to ensure cows receive the recommended 4g/day.

"I know it's hard to quantify improved rumination but the cows just look more comfortable," Robert explains. "We've also noticed that the consistency of the dung in the field has improved. In the autumn we dried off cows nearer condition score 3 rather than the 2.5 we reached the year before. I think that it is in part due to improved feed efficiencies - the cows are able to make more use of the feed that is passing through their bodies.

"We had a quite a poor first cut last year, due to the weather conditions, and I can't help think that the Actisaf in the cows' diet has helped manage the high lactic acid in that as well. We are looking for a consistent environment for the rumen across the year, and the Actisaf in the diet has helped us maintain that 'even keel' through both wet and dry grazing conditions, during mating and when the diet has changed."

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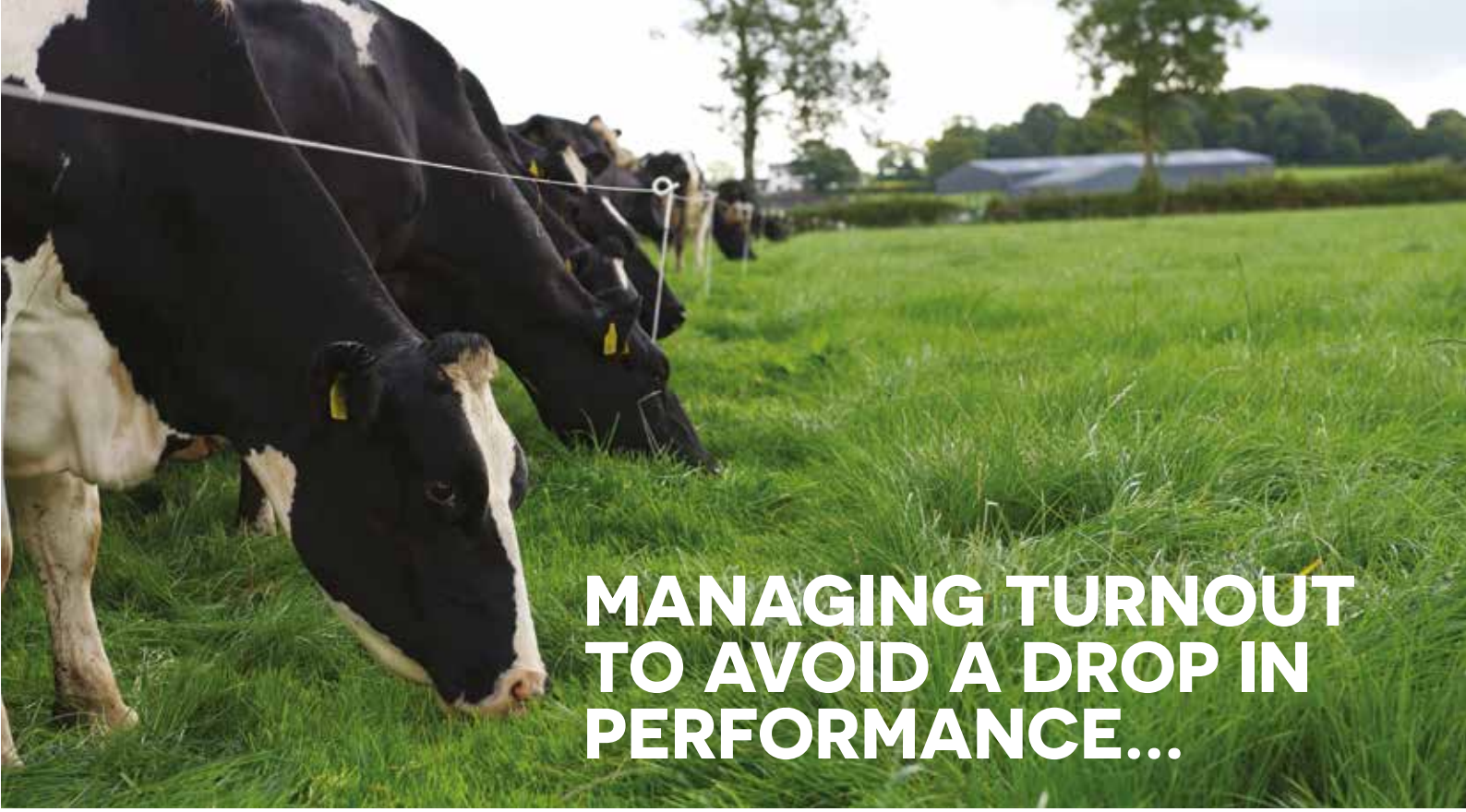

MANAGING TURNOUT TO AVOID A DROP IN PERFORMANCE...

Current economic conditions mean making the most from grazed grass is more attractive than ever. More grazed grass in the diet means lower feed and direct costs, and well managed swards often have higher nutrient content than many conserved forages.

Managing cows at turnout to ensure a smooth transition and avoid drops in performance, milk yield, constituents and fertility, is crucial. It generally takes approximately three weeks for the bugs in the rumen to adapt to significant diet changes so manage the change to grazing gradually.

On/off grazing

- Even a few hours on/off grazing, when conditions allow, means cows get used to grass.
- Weather and ground conditions permitting, cows should be able to consume 5kg DM in three hours.
- Buffer feed with a high D-value grass and/or maize silage, fed alongside a parlour compound.

Full turnout

As weather and ground conditions improve, and the proportion of the grass in the diet increases, you need to feed a compound that is balanced relative to what your grass is supplying, in order to avoid a drop in performance.

Highly digestible grazed grass is rapidly fermented. This means rumen pH of cows grazing highly digestible pasture can remain below pH 6.0 for more than 50% of the day. Grass can also be high in crude protein, and have low NDF (stem), as well as potentially high or variable sugars.

What to look for in a feed at grass:

- **14%-16% crude protein**
- **High in digestible fibre, for example sugar beet pulp/soya hulls**
- **Balanced source of cereals, maize and barley**
- **Source of UDP/bypass protein**
- **Minerals and vitamins that grass is low or deficient in, especially magnesium**

Actisaf live yeast in the cows' ration reduces set backs in performance at turnout by helping the bugs in the rumen adjust to grazed grass in the diet and improving rumen function.

Actisaf live yeast will reduce the risk of sub-acute ruminal acidosis throughout the grazing period. It should be included at a rate of 1kg of Actisaf/tonne for a grazing compound, assuming a feed rate of 4-6kg/head/day.

One of the key ways to manage cow performance at turnout is by monitoring what the cow is telling you, and taking action as a result:

- **Rumen fill** – assess rumen fill 2-3 hours after milking to determine whether adequate grass has been allocated.
- **Rumination** – target more than 65% of cows lying down vigorously chewing their cud two to three hours after milking (unless drinking or eating).
- **Dung consistency** - loose bubbly dung with undigested fibre particles (less than 1cm) is indicative of sub–optimal rumen fermentation.
- **Cud balls** - presence of cud balls are indicative of poor rumen function.
- **Body weight loss** – Sub-optimal rumen function can lead to increased body weight loss due to reduced intakes and impaired digestion.

EFFICIENCY WITHOUT COMPROMISE

Efficiency from grass, but without compromising production or fertility, is the aim of Cheshire dairy farmer, Richard Kennerley, who milks 320 Holstein Jersey cross cows, in partnership with his parents and wife, Pam, in Somerford Booths, near Congleton.


Richard Kennerley

"With our well draining soils and good annual rain fall, it is important for us to make the best possible use of the high quality grass that grows here. It's the most cost effective feed there is, but not when feeding it comes at the expense of rumen function," says Richard.

As the percentage of grazed grass in the cows' diet has risen in recent years, Richard has had to become skilled in managing what that means for rumen function. Historically some cows had issues with body condition score loss when they went out to grass, and Richard noticed the dung was loose and almost 'fizzy' in appearance.

"I felt rumen performance wasn't as good as it could be and knew we needed to do something to help the rumen utilise the fermentable sugars in the grass and make the best possible use of the protein," explains Richard.

"I also think diet consistency is crucial for the cows. The dry matter and nutrient content of grass differs widely from day to day. I want to know I'm managing the peaks and troughs effectively."

Marshall Booth, from HJ Lea Oakes, suggested that Richard think about feeding Actisaf live yeast in the ration in order to ensure rumen stability, and in spring 2015 Richard began to include Actisaf in his grazing concentrate.

"The high level of sugars in grass is beneficial for milk yields and solids, but excessive sugars and low fibre can affect rumen function," explains Marshall Booth.

"Grass high in sugars is rapidly fermented by rumen microbes, which can lead to a decrease in rumen pH. Added to this, low grass fibre levels limit rumen scratch factor, which can reduce rumination, saliva flow and ultimately rumen buffering, all of which contribute to the decline in rumen pH. Low rumen pH can lead to the development of acidosis.

Since the inclusion of Actisaf in the diet Richard has noticed that the dung has firmed up, cows are keeping condition score well at grass and milk yields are creeping up.

Richard's cows are split evenly between spring and autumn calving blocks, with an average yield across both parts of the herd of 7,200 litres/cow/year. He feels that optimising rumen function at crucial times like mating is key to fertility success.

"The spring block begin to calve around the second week in February and go out to graze as soon as conditions allow, and when there are a decent sized group ready," explains Richard. "Cows are then fed between 4-6kg of concentrate per day, until grazing conditions allow it to be dropped to around 2.5kg to 3kg.

"The autumn block starts calving at the beginning of September and are fed to yield in the parlour, as well as wholecrop and grass or grass silage, amounts again depending on grass availability.

"During mating we AI for only five or six weeks, and we need to know that cows are performing well at this time. Putting Actisaf into the diet has meant we're confident of the rumen function and performance, and this is reflected in our 95% submission rate," says Richard.

"We run a simple system here, which is pretty reliant on high quality grazing. The inclusion of Actisaf means I'm now confident that the cows' rumens are stable enough to utilise the grass in their diets efficiently," he concludes.

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