



ACTISAF HELPS DELIVER CONSISTENCY...

Consistency is key for Lancashire dairy farmer, Steven Holden (pictured), and that's why he feeds his herd Actisaf live yeast.

Steven milks 95 cows at Mill Brow Farm, Hutton, with cows averaging 9,000 litres/year at 4.21 per cent butterfat and 3.24 per cent protein. Milk is supplied to Arla, so composition is important as well as overall yield.

"We had previously seen issues with acidosis in the herd and have tried feeding competitor yeasts in the past with variable results," Steven explained. "Around three years ago we started working with Richard Bainbridge at ARN and he suggested we feed Rumisaf (which contains Actisaf) as part of a wider review of our nutrition."

Steven's herd is housed at night all through the year and has access to grazing by day in the spring and summer months. Cows are fed a partial mixed ration, which is formulated to provide M+28 litres and comprises grass silage, Trafford Gold, blend and, when required, molasses. Cows are all run as one group, and calve all year around with a slight bias towards the autumn.

"Richard suggested we follow a very simple nutrition approach that is all about keeping cows healthy so that they perform," Steven explained.

"We take three cuts of high quality grass silage each year and buffer feed throughout the grazing period to maintain performance.

Cows are housed in cubicles in the winter and fed TMR and then fed to yield in the parlour, with the highest yielding cows getting 8kg."

And the results speak for themselves.

"Since we started working with Richard and included Rumisaf in our rations, milk yield has increased by around 1,000 litres/cow and fertility and milk quality are good. In the last year our calving index has fallen from 413 days to 387 days and our calving to conception has fallen from 122 days to 98. We average 1.7 serves/cow and submission rate at 100 days stands at 78 per cent."

"Ultimately, I feed Rumisaf to ensure that the rumen bugs are working properly in my cows," Steven concluded. "Rumisaf may not be the cheapest feed additive out there but it definitely works and delivers consistency in terms of performance. Since I've been feeding it our fertility has been good and yield has improved. What's more, whereas in the past butterfat always dropped when we turned cows out to grass, it now remains steady, which is great as we are paid on milk composition."



Phileo

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GETTING THE BEST FROM SILAGE THIS WINTER...

Feeding cows through the winter is always a challenge and this year may be more difficult than some. Many grass silage crops have analysed at less than 11 MJ ME/kg DM, which is significant once you consider that the difference between 10.5 ME silage and 11.5 ME silage, (assuming a feed rate of 11 kg DM of silage/day) will be equivalent to 2.2 litres milk/cow/day. What's more, many grass silages this year are stemmy, with high fibre levels impacting digestibility.

Not only will forage quality be a challenge for many dairy herds but preserved forages are also highly variable, something that is almost impossible to avoid but can have a big impact on rumen function and performance.

Forage variability is inevitable

With different fields having different grass mixes and grass maturity, it's inevitable that there will be some variability even within a single cut in the clamp. Some fields may even have been subjected to different weather through the harvest process. Some farmers then store more than one cut within the same clamp, adding to range within each grab-full at feeding time. Add to this the spectrum of different forages fed (e.g. maize and whole crop), and the variability within those forages, and the reality is that the nutritional variation within the forage part of a dairy ration is potentially massive every day.

To add to the challenge, many farms also feed by-products from the brewing, bakery and confectionery industries and these can

add further variability due to differences in raw materials. What is clear, then, is that it is actually quite hard to feed the same ration every day and yet we know that consistency is king for optimal digestion and rumen fermentation – helping to maintain high feed intakes, minimise digestive upsets and improve milk yields.

Why does variability matter?

Inconsistency in forage has a significant impact on the nutritional composition of the ration presented to cows each day. It is important to remember that when we feed a ruminant we are really feeding the bugs within the rumen, which in turn feed the cows. Whilst only around 20 per cent of the bacterial population of the rumen has been classified to date, what trials have shown is that different categories of bugs flourish depending on the diet composition being fed and that these bacterial populations take time to adapt to a new diet – typically up to three weeks.

If the forage being presented to the cows is highly variable, then the rumen population has to change frequently to make the most of the forage being fed - and with this taking up to 3 weeks, how can we expect to see optimal performance on a daily basis.

What can you do to maximise performance from forage this winter?

There are some simple practical things that can be done to help maximise performance this winter:

Sample forages regularly

One thing that can make a real difference is regular forage sampling. Gaining a better understanding of the quality and makeup of forage stores can help you deliver as consistent a feed ration as possible. While a silage core sample will usually be taken by a nutritionist at the start of the winter, it is important to analyse clamp faces at least once a month and ensure that samples taken are representative of forage across the whole clamp face.

This will enable you to identify any variation in forage quality and make necessary adjustments to feed rations to maintain consistency.

Already this year we have seen analyses of silage within the same clamp varying hugely in samples taken just a few weeks apart (see table below).

Manage feed delivery

Ensure that you are presenting mixed rations in the most consistent way. Do not overload feeder wagons and ensure that the wagon is loaded in the correct order (smallest first) and mixed for the same amount of time each day to ensure mix consistency.

Structural fibre, such as straw, must be adequately chopped (to the width of a cow's muzzle) to reduce sorting and feed must be distributed evenly against the feed barrier to encourage intakes.

Feed Actisaf live yeast

Feeding Actisaf live yeast can deliver real benefits when you are facing highly variable forage in the winter, particularly if that silage has high fibre levels.

Trials have shown that Actisaf reduces the bacterial diversity in the rumen and promotes the growth of beneficial bacteria, as well as stabilising rumen bacterial populations during diet changes. What this means is that it allows for faster adjustment to new diet composition or diet ingredients and minimises any losses in production that would otherwise occur.

Specifically, we see an increase in lactate-utilising bacteria, which reduces lactic acid and helps stabilise pH in the rumen,

as well as an increase in fibrolytic bacteria, which helps fibre digestion. Indeed, Marden et al., 2008 demonstrated that neutral detergent fibre (NDF, which is the most common measure of fibre and represents most cell structure in forage including lignin, cellulose and hemicellulose) digestibility was greater when diets were supplemented with 5g/day of Actisaf live yeast (41.6% NDF digested) compared to a control diet (29.6%) or a diet where sodium bicarbonate was fed as a rumen buffer (34.3%). Similarly, acid detergent fibre (ADF, which represents the least digestible fibre portion) digestibility was greatest in a diet supplemented with Actisaf (32.3% digestibility), intermediate in a diet buffered by sodium bicarbonate alone (24.4%) and lowest in a control diet (18.1%).

Through its mode of action, Actisaf offers many advantages through the winter feeding period, particularly when forages are likely to be stemmier and more fibrous as they are this year for many farmers, as it stabilises rumen function, which helps the cow cope with variation in forages, and facilitates better fibre digestion, helping drive milk from forage despite higher fibre levels.

SUMMARY

This year, winter feeding presents a challenge in terms of forage variability and quality, with many farmers having grass silage with high fibre levels and low ME. You can reduce the impact of these issues by:

- Regularly sampling forage through the winter, so that diet formulation can be adapted to ensure consistency
- Focusing on feed presentation and mixing
- Adding Actisaf live yeast to your ration to improve fibre digestion and rumen stability, increasing milk from forage and overall performance.

Table 1: Grass silage analysis - 2016 first cut - all taken from single clamp on the same farm. Some dates include two samples to demonstrate variation on the same day in different parts of the clamp.

Date	DM %	ME MJ/kg	D Value %	CP %	NDF %	pH	Sugars %	Ash %	VFAs g/kg	Lactic acid g/kg
07/06/16	24	10.2	63.8	11.4	50.8	3.7	1.2	7.6	0.3	66.6
21/06/16	24.2	10.4	64.9	11.6	49.2	3.7	0.7	7.7	0.3	91.3
08/07/16	23.6	11.2	69.7	14.3	48.5	3.5	0.2	7.7	13	104.5
08/07/16	24.7	10.5	65.9	11.5	47.7	3.7	0.4	8	7.3	99
02/08/16	25.7	10.8	67.6	12.6	48.9	3.7	0.6	7.4	34.4	100.8
02/08/16	26.5	9.9	61.7	12.1	46.7	3.7	0.9	7.9	18.8	98.5
02/09/16	23.7	11.8	74	16.9	43.8	3.7	0.5	7.9	24.2	127.9
05/10/16	38.9	12.1	75.8	17.1	40.7	4.2	4.2	9	15.8	59.2

A SMOOTH TRANSITION...



Jon Barber didn't have the best start to the contract farming agreement, Herdwise, he entered into with Robert Wain, on November 1st last year. Within a week he'd broken his ankle badly but, Jon argues, it gave him the time to plan out the system he really wanted on the 550 acres at Friends Farm, near Whitchurch in Shropshire.

"We knew we wanted to move the 350 high yielding Holstein cows to a system focused on more utilisation of grazed grass and home grown forages and, with the liquid milk contract we are on, we didn't want to compromise on yield. We also wanted to move to a two block (autumn and spring) calving system," says Jon. "Being laid up gave me the time to plan out the rotational grazing system we've implemented this summer and plan as smooth a transition to the new system as possible."

Jon knew he was changing the diet of the cows considerably when they went out to grass in the spring.

"I know the bugs in the rumen don't like change," says Jon. "It can take three weeks or more for them to adapt to new nutritional challenges, meaning optimising the forage in the diet can be tricky. I also knew we would be asking the cows to increase the amount of grazed grass in their diet in the summer and conserved forages in the winter."

The rumen of the dairy cow can react badly to the variability that arises in grazed grass - from day-to-day depending on prevailing weather conditions and throughout the grazing season as grass quality changes - and to the nutritional changes that can occur when moving onto ensiled forages.

Philip Jackson, from HJ Lea Oakes spoke to Jon about these challenges and he suggested feeding the cows Actigraze, which has Actisaf live yeast as a key ingredient.

"The Actisaf live yeast in Actigraze works in a number of ways," explains Philip. "It removes oxygen from the rumen and stabilises the bug population during those periods of diet change or nutritional inconsistencies."

"It also promotes the right kind of bacteria in the rumen - the fibre digesters and the lactate utilising ones - which stabilises the rumen pH. All of this leads to a more consistent rumen environment, ready to make the best use of the grazed grass, conserved forages and concentrates in the diet."

Jon began to feed Actisaf before the cows were turned out around February 20th using on-off grazing when conditions allowed, and is so impressed with the results that he plans to continue feeding it across the housed period.

"We're now heading towards an autumn block calving herd of 350 and a spring block of 150, and will be pushing toward 12 tonnes of DM/ha grown next year [includes grazed grass grown (not utilised) and baled silage taken as surplus, as well silage cut for the pit] with a long term aim to get to 15 tonnes DM/ha," he says. "All cows have grazed really well over the summer. Yields are about 7,200 litres, with fat at 3.99% and protein at 3.27% and you can tell they're keen to get out there and graze. What's more, dung consistency has firmed up, a sure sign of a settled, productive rumen."

Jon has crossed all cows and heifers to Norwegian Red genetics in order to benefit from improved longevity and fertility while maintaining the drive for grass-based yield. "Milk from forage stacks up economically for us and I need to know the cows can utilise the pasture and silage I put in front of them. The Actisaf yeast in the diet gives me that confidence and allows me to challenge the cows by reducing bought-in feed without sacrificing performance."

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