



ACTISAF SUPPORTS MILK COMPOSITION

Low milk prices last year led Yorkshire dairy farmers, Gary & Steven Swires, to question the inclusion of yeast in their dairy cow rations, despite having fed yeast for a long time.

"It is easy to see ration additives such as live yeast as 'magic dust' and with milk prices under such pressure we thought about stripping back all inclusions to save money," Gary explained. "But we are quite taken with Actisaf live yeast – it really does seem to make a difference – so we resisted removing it."

Gary & Steven farm around 750 acres at High Moor Farm near Harrogate. They have around 400 cows calving all year around, and rear all young stock, with heifer replacements calving at around 24 months and all other cattle being sold at around 20 months of age as store cattle.

The brothers used to grow maize and wholecrop silage but, with the farm extending up to 700 ft. above sea level, those crops could prove unreliable and, consequently, weren't very cost effective. As

a result, they now run a simple ration based around three cuts of good quality grass silage, with some red clover/hybrid grass mixtures. "Grass silage is good for milk quality and the simpler system suits our land. Cows average around 9,000 litres/year with milk composition averaging 4.30 per cent butterfat and 3.25 per cent protein."

So, what makes Gary & Steven so confident that Actisaf is worth including, even when low returns put pressure on costs?

"We include Actisaf in our blend and last year we changed blend and that meant no more Actisaf," Gary explained. "Shortly after the change our milk quality dropped from 4.3 per cent butterfat to 3.8 per cent butterfat, which was a concern. We decided to go back on Actisaf to try to stabilise milk composition. Butterfat returned to the previous level, which was great, and this seemed to confirm a strong correlation between Actisaf inclusion and milk quality. I don't think we'll be taking it out again."



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MAXIMISING MILK PRODUCED FROM FORAGE THIS WINTER

As we head towards autumn, things are looking more positive on many dairy farms. Milk prices seem set to continue rising in the weeks ahead and forage quality appears to be better than last year. Add to this the fact that the milk price:feed price ratio is as good as it has been for many years and there should be the opportunity to feed for more milk this winter and see a return.

First cut silage has potential...

One thing that is promising is that this year's first cut silage looks good. Analysis conducted by Trouw Nutrition GB on first cut grass silage suggests good quality, with higher nutrient value than 2016 first cut. Specifically, dry matter is up 2.2% to 33.4%, crude protein is up 0.5% to 15% and ME is up 0.3 to 11.1. Assuming DMI of 10kg/day, that increase in ME is worth 0.6 litres/cow/day on average 2016 silage.

Rapidly fermentable carbohydrates are high, but slowly fermentable carbohydrates are low, which means that there will be a need to supplement the forage with digestible fibre in the diet for optimal rumen energy/protein balance. Overall, the acid load in first cut is high and the fibre index is low, which means that, whilst there is a real opportunity to maximise milk from forage this winter, consideration needs to be given to rumen function.

Test, test, test...

Gone are the days when it was sufficient to test silage once at the start of the winter feeding period and base all rationing decisions on that analysis for the rest of the winter. Test your silage clamp every 4-6 weeks, as there can be substantial variation in nutrient analysis through the clamp, particularly if different cuts are clamped together. Silage in the clamp is like money in the bank - you would look at your account balance regularly, so do the same with your silage.

Managing the transition to winter diets

Cows that have grazed during the winter need to be gradually adapted to the winter diet over the course of three weeks. For cows that are being buffer fed at grazing this will involve

gradually stepping up the winter diet over three weeks as grass supply diminishes on the grazing block. Abrupt changes in diet, particularly with forage, have been shown to put cows off their feed for a period of time and reduce the rumen digestibility of feed, and subsequent milk yield, while the rumen microbial population adjusts to the new diet - this takes three weeks for full adaptation.

Balancing and feeding winter diets - maximising dry matter intake

With highly digestible forages in the diet, it should be possible to get forage constituting at least 60% of the diet. This will largely depend on the digestibility and ME content, as ideally the NDF of the overall diet for high yielding herds should be around 32% NDF (although this can be slightly higher for lower yielding herds).

Recent surveys conducted by the University of Wisconsin on 15 of the state's top dairy herds demonstrated that forage quality, particularly high NDF digestibility, was one of the key factors (along with cow comfort) leading to some of these high genetic merits herds achieving yields of upwards of 18,000 litres per cow.

Key factors to maximise dry matter intake:

- Keep feed in front of cows at all times - minimum 6 push ups per day (incl. 1 or two feeding actions with the diet feeder)

Feeder wagon mixing:

- Load in the correct order - usually forages first
- Don't overfill the feeder - it won't mix properly. This will result in forage and concentrate being unevenly distributed at the feed fence, leading to variable milk yields, as some cows will eat more concentrate than forage
- Don't over mix the feed - ideally feed needs to be 2-4 inches long (the width of the cow's muzzle) for good rumination
- The TMR dry matter should be about 45%-48% DM to avoid sorting and maximise DMI. For very dry forages water may need to be added. This is critical to get smaller particles of concentrate to stick to forage and minimise sorting.



Feed space:

- Provide a minimum of 65cm head feed space per cow
- Ensure neck rails are set according to the average height of your cows – look for bald patches on cow's necks and if you see them then your feed barrier is restricting intakes. Cows should be able to reach out 1.0-1.25 metres into the head feed to eat feed.
- Ensure feed trough concrete surfaces are smooth and clean and not pitted. If concrete is rough and pitted look at a resin based coating or tiling the trough floor to enhance DMI. Clean waste away every day.

Housing:

- Provide one cubicle bed per cow, ideally 130 cm wide and 200 cm long from nose to tail. Deep sand beds are best, and if you can't use sand then ensure you provide a deep bed for comfort
- Ensure concrete floors are grooved to avoid slipping
- Review your crossover passages between cubicle beds – can a cow walk to access feed and water in a minimal amount of time (typically one crossover per 12-14 beds)?
- Water troughs – water pressure/flow rate and cleanliness of the trough are critical. Cows consume 40%-50% of their water intake directly after milking, so look at locating a trough outside the milking parlour on the way back to the cubicle shed.

CowSignals:

- Rumen fill: 3-4 hours after morning milking we are looking for a score of 3 or greater, triangular area in front of the hook bone on the left hand side of the cow should be full out
- Cudding rates – 70%+ of cows should be lying down in the cubicles chewing the cud 4hrs after morning milking if they are not eating or drinking water. 55+ cuds per bolus.
- Dung consistency – ideally a dinner plate turned upside down – fibre should be well digested, with no grains visible and it should be creamy and not too watery or too stiff

Feeding a live yeast to maximise rumen efficiency – maximising fibre digestion and minimising the threat of acidosis...

- Feeding Actisaf Sc 47 improves NDF digestibility, releasing more energy from fibre in forages resulting in more available VFA (energy) for maintenance, production and reproduction. Marden et al, 2008 demonstrated that live yeast is more effective than sodium bicarbonate at rumen buffering after feeding, whilst also improving fibre digestion.
- Actisaf conditions the microbes to ease the transition between diets, particularly relevant during the transition to housing to ensure that milk production is maintained and yield does not suffer.
- Actisaf is the only live yeast scientifically proven to provide a double benefit in the rumen – increasing fibre digestion, but also minimising the build up of lactic acid in the rumen which is the key contributor to the development of acidosis. This has been scientifically proven in peer reviewed research time and time again.

SUMMARY

- First cut silage looks good on average, but will need supplementing with digestible fibre for optimal rumen energy/protein balance. Silage has a higher acid load, and low fibre index so consider rumen function. Test silage every 4-6 weeks through the winter.
- Manage the transition to winter rations over three weeks to give rumen bugs the time to adapt.
- Think about feed bunker management, housing and cow comfort to maximise dry matter intake.
- Consider adding Actisaf live yeast to rations to ease the transition on to winter diets, to increase fibre digestion and to support rumen function.



MILK YIELDS GET A BOOST FROM ACTISAF

Adding live yeast to the diet at Hare Appletree Farm has helped farmer, Andrew Metcalfe, improve milk yields whilst achieving more milk from forage.

Andrew farms in partnership with his mother, Christina, and father, John, on a 250-acre traditional mixed hill farm in Quernmore, Lancaster. The farm has a herd of 85 cows and flock of 450 sheep, both of which graze the farm's traditional pastures. The herd is mostly made up of British Friesians, which suit the farm's system and location – some 400 metres above sea level with stony, heavy, clay soils. The herd calves all-year-around and replacements are reared on the farm.

Andrew started working with Mark Gorst from Advanced Nutrition in September 2014 and in April the following year, as the cows went out to grass, Mark suggested adding Rumisaf, which contains Actisaf live yeast, to the cows' diet. "When we started working with Mark our average yield was 7,500 litres per year," explained Andrew. "I knew we could be doing better - I only had to look around at other farms in our area to see that. It was a case of getting some help to get to where we wanted to be."

One of the main limitations on the farm is having to use the same fields for the sheep and lambs, as well as for the cows and silage. "It's a balancing act," explained Andrew. "We can only take two silage cuts as there isn't enough time to do three by the time we've lambed and can move the sheep off the grazing land and on to the moorland, so we focus on getting the best quality from those two cuts," said Andrew. Quality of grass is also a limiting factor and

Andrew is in the process of reseeding some areas of the farm. After starting to work with Advanced Nutrition, the cows were put on to what Mark describes as a "relatively straightforward" ration. They are buffer fed a TMR of grass silage, chopped straw and blend, along with Rumisaf and minerals from Advanced Nutrition. "I recommend Rumisaf to farmers where we need to gain control of the rumen," said Mark. "In Andrew's case we introduced it when the cows were turned out to grass to ensure a good transition, we have left Rumisaf in the diet and since then we have never seen any issues when cows are brought back in, or when silage changes, which would typically be times when rumen function is challenged."

Following the introduction of the new approach to feeding, milk yields have risen steadily and now stand at 9,000 litres/year with butterfat at 4.2 per cent and protein at 3.2 per cent. "Importantly for us 3,000 of our litres are from forage and, since introducing Rumisaf into the diet, litres from forage have increased by around 800," said Andrew. While this improvement can't all be attributed to the addition of yeast, Andrew feels it certainly played a role alongside better forages.

"Last year we saved money on blend because the quality of forage was better and cows are performing so well on the diet," said Andrew. "The results speak for themselves, we were at 7,500 litres/year and we're now at 9,000. The cows are healthy and look well, we don't see any rumen upsets and we have seen the improvements in yield – the new approach works well and I'm pleased with the response from Rumisaf," he concluded.

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