



## DAIRY FARMER USES ACTISAF TO SUPPORT COW HEALTH AND PERFORMANCE ON ROBOTIC DAIRY UNIT

Balancing feeding cows enough concentrate to support higher yields, but not compromising rumen health is a challenge on any high-performance dairy unit. Including Actisaf in his cows' diet has helped dairy farmer, James Moore, maintain strong cow health and performance despite this challenge.



James Moore, who manages a 320-acre farm in Co. Tyrone, Northern Ireland, has carried out this delicate balancing act since his family made the change to running a robotic dairy system in August 2012. Now, ten years later, he feels he has got the balance about right, with the inclusion of Actisaf live yeast playing an important role in helping maintain overall cow performance and health.

"In my experience, any herd is so much easier to manage if cows are kept healthy and happy," explains James. "And we find that most cow health complaints start because of stomach problems. That's why we want to include something in the diet to help manage rumen pH and maintain good rumen function."

"We have some very high yielding cows in our herd, who can push up to 70 litres of milk a day. Through a combination of our PMR provision, robotic feeders and out of parlour feeders, these cows can push intakes up to 20kg of concentrate and blend a day. This, combined with variation in silage quality throughout the season, has the potential to cause some rumen challenges. By including high rates of Actisaf in the diet, we know that we can keep rumen health in good condition, maximise milk yields and avoid any health issues."

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James farms alongside his brother, Kenny, where they milk 250 cows through four Lely robots, with around 40-50 dry cows also currently on the farm. Average milk yields stand at around 8,500 litres, with butterfat at 4.3% and protein 3.4%, and all milk goes to Lakeland Dairies. Cows are visiting the robots an average of three times a day.

James and his family used to graze their cows, but the logistical challenges of getting cows out to grass forced them to reassess their options and then house cows all year round. Once they had embraced changing their system, it didn't take long until they adopted an automated approach, in 2012.

"We really enjoy running a robotic system," continues James. "You get so much useful management data from the robots, and it gives you flexibility in terms of how you use your time. Those hours previously spent milking in the parlour can be used to analyse data and focus on issues that might be holding back a cow's performance."

Cows are fed a PMR consisting of grass silage and 2kg of blend - which includes Actisaf - through a mixer wagon. A mix of Fane Valley Platinum 22% nuts and Platinum 18% nuts (also containing Actisaf) is then fed through the robots, with the 18% nuts also fed through out of parlour feeders.

"Cows will receive a maximum of 8kg of concentrate through the robots, with supplementary intakes from out of parlour feeders graded according to yield," says James. "Our targeted approach of matching precise feed to yield means we can use Actisaf to cater for our highest yielding cows, who can receive a total of up to around 20kg of concentrate and blend to support 55+ litres of milk."

Actisaf has traditionally been included in the cows' diet at a rate of 4g per cow, per day which has provided benefits to the herd through improved feed digestion and stabilisation of rumen pH. These benefits have contributed to increased milk yield and

milk constituents, and resulted in less issues associated with poor rumen health. However, in 2020, James agreed to take part in a trial run by Fane Valley Feeds, examining the benefits of increasing this rate to 10g per cow. This stemmed from a trial of Actisaf conducted by Nottingham University on how the dose rate affected performance.

"We started a three-month trial in September 2020 phasing out the chemical buffer historically used alongside the Actisaf, and built up to 10g of Actisaf per cow, per day, before gradually reducing it again," explains Dr David Johnston, from Fane Valley Feeds, who helped oversee the trial. "The Actisaf was provided through a combination of Platinum feeds, whereas before it had only been provided through the nuts."

"During the period of the trial James went from feeding out first cut silage, to some poorer quality, more stemmy second cut. While milk yield dropped slightly, as anticipated, it wasn't anywhere near the level expected and I am confident that this is because of the positive impact that the Actisaf was having on rumen performance and increased fibre digestibility." Cow health was also excellent, with James reporting no issues with foot problems, mastitis, or other common health complaints.

James was pleased with how the cows performed in the trial and provided renewed confidence in the benefits of Actisaf to his herd.

"Our cow health is really good, and they aren't suffering any digestive issues despite their high feed intakes and fluctuations in silage quality," concludes James. "The Actisaf is also supporting good fertility in the heifers and cows, and I am particularly pleased with conception rates. I do all the AI work on the farm, and the majority of cows and heifers conceive after a first service."

"Overall, Actisaf has played a positive role on our farm, and I am happy to keep feeding it for as long as we continue to receive the benefits that we've noted over the last few years."





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## EXPERT'S VIEW

Kevin Doyle, technical sales manager from Phileo UK & Ireland

As Mr. Moore is feeding quite an intensive diet, his focus on rumen health and performance is exemplary and for me, what he experienced here was Actisaf's strong effect on rumen microbial populations.

Actisaf is proven to significantly increase populations of the key bacteria consistently found in the most feed efficient animals in the world. The key microbes identified in these animals are involved in acid utilisation and fibre digestion. Actisaf stimulates the growth of these exact same microbes and is the only strain of live yeast to have consistently demonstrated an increase in these key bacteria across a number of peer-reviewed papers.

### Lactic acid conversion improves feed efficiency

Lactic acid negatively affects rumen pH, causing digestive upset. Actisaf helps to stimulate *M.elsdenii* bacteria which convert lactic acid into propionate – a much weaker acid and the majority source of valuable glucose to the cow.

This conversion of lactic acid also stabilises rumen pH, which increases feed digestion, particularly fibre digesting microbes which in turn further increases the energy available to the animal. This has been demonstrated at Mr. Moore's farm as he introduces his stemmier silage. By increasing the pool of propionate (glucose) available to the cow he has significantly improved the yield of energy from every bite of feed.

This is particularly important in herds like Mr. Moore's where high levels of concentrates are fed, due to the resulting high volume of lactic acid and other volatile fatty acids in the rumen. If left to build up, they can lead to rumen fermentation taking a nasty turn. It's just like poor fermentation in a clamp of silage - when oxygen gets in, we all know what happens!

### Optimising rumen conditions improves health

Optimising rumen conditions also lowers inflammation – something which is energy hungry and a key source of health problems. The most stressful periods in the production cycle, the transition period and early lactation, is where these health problems originate. This includes 60% of all involuntary cull cows, increased mastitis levels and poor milk production.

By optimising rumen conditions, we optimise animal health. A holistic approach which takes in many factors is always needed for animal health. However, research shows supplementing cows with 10g of Actisaf per head per day significantly reduces non-esterified fatty acids BHB and NEFA (indicators of ketosis), as well as Haptoglobin (a key indicator of inflammation). This further explains what we have seen at Mr. Moore's farm.

### Feeding at the recommended dose rate

Mr. Moore already saw value from Actisaf when feeding it at the lesser rates of 4g per cow, per day. However, when he increased the rate to the recommended 10g per cow, per day, with no chemical buffers, he had no issues with acidosis. The higher dose rate supported the rumen in dealing with the stemmier, less digestible grass silage when the herd moved on to it.

As trial work on Nottingham University's dairy herd has demonstrated, feeding 10g of Actisaf is warranted in higher yielding herds. They have higher feed intakes which leads to faster passage rates of feed through the rumen, which results in reduced digestibility of that feed in the rumen. Adding Actisaf at 10g per cow, per day significantly increases the activity of the key rumen bacteria that stabilise rumen pH. This increases the digestion of feed and ultimately improves the feed conversion efficiency of the herd.

In summary, as demonstrated on Mr. Moore's farm, Actisaf helps optimise rumen function, which in turn improves herd health, performance and profit. By creating an optimal rumen environment Actisaf allowed Mr. Moore's herd to cope with the changes in diet.