



YEASTSOLUTIONS

ISSUE 40 - WINTER



“Putting Actisaf® into the diet has meant we’re confident that the cows’ rumens are stable enough to utilise the grass in their diets efficiently, which our system is reliant on.”

Richard Kennerley
Plum Tree Farm, Cheshire



“We added Actisaf® to our milking cow diet to help deal with diet changes and rumen function. We saw a big difference in behaviour, manure and, more importantly, yields. Our butterfat levels have risen from 3.9% to 4.1%!”

Simon Davies
Castellhyfryd Holsteins, Camarthenshire



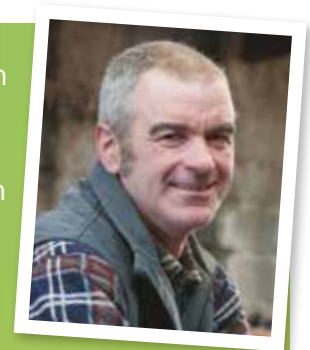
“The cows perform well on Actisaf®. We’re not feeding them any more forage than we used to but they just seem to be able to make better use of it. Milk from forage figures have risen to 4,291 litres and you can tell from the way the cows behave that rumen function is good.”

Paul Bradbury
Brook House Farm, Shropshire



“The nature of a Jersey’s high energy diet means we are always pushing the rumen hard anyway, and the addition of Actisaf® to the diet helped the rumen function better - We saw higher intakes and better feed conversion soon after we added it to the diet!”

Geoff Pye
Bayview Jerseys, Lancashire



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GETTING THE MOST OUT OF SILAGE THIS WINTER

Winter feeding always has its challenges, and this year will be no exception after a rollercoaster year for grass growth around the UK resulted in 1.5 t DM/ha less growth than in 2019, according to AHDB's 'Forage for Knowledge' figures.

We are seeing an even greater degree of variability in forage quality than normal this year. Early first cuts are performing really well, with later first cuts and second cuts analysing higher in NDF and lignin content (likely due to drought stress) making them more difficult to digest by the rumen microbes.

As a result of variable weather conditions and different stressors on plants at particular points in the growing season, such as drought for example, most farms will see variability within their grass, maize and wholecrop silages, even within individual cuts as performance between fields can vary greatly.

WHY DOES VARIABILITY MATTER?

Variability within clamps is inherent and unavoidable, particularly in grass silage. The level of variability is largely dictated by factors like reseeding frequency, field management, and the number of cuts clamped together in one clamp.

Figure 1 illustrates how this year's first-cut grass silage analyses different within the same clamp. For a cow consuming 11 kg DM per day, the difference in ME intake between these two samples is the equivalent of more than 2 litres of milk, even without accounting for the difference in crude protein. This clearly illustrates the variability that can exist within clamps from the same cut of silage, as well as the need for regular sampling of forages to identify changes before they lead to a drop in production.

Figure 1: Comparative Grass Silage Analysis

	Sample from Top of Clamp	Sample from Bottom of Clamp
Dry Matter	20%	28.3%
pH	4.4	3.6
NDF	58.3%	37.2%
D value	64	71
ME	10 MJ/kg	11.1 MJ/kg
CP	10.1%	14.0%

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 actually feeding the rumen microbes, which in turn feed the cows by converting feed and forages into nutrients and energy.

While only around 20% of the bacterial population in the rumen has been classified to date, trials have shown that different microbes flourish depending on the diet composition, and these bacterial populations take time to adapt to a new diet – typically up to three weeks.

When variable silage is fed, the rumen microbes have to change frequently in response, reducing the efficiency at which cows convert forage to milk. But if forage is inherently variable, what can we do to support good rumen function and optimise performance?



Recent trial work from the University of Nottingham has proven **Actisaf®** to:

- ↑ Feed efficiency by 5.5%
- ↑ Energy corrected milk yield by 5.9%
- ↑ Butterfat %

Adding **Actisaf® live yeast** to your dairy ration can return up to **8x your investment** through improved milk yields.

ActiSaf Sc 47

1) Sample forages regularly

As demonstrated above, regular forage sampling can help us gain a better understanding of the quality and makeup of forage stores, then deliver as consistent a feed ration as possible to cows. While a silage core sample will usually be taken by a nutritionist at the start of the winter, clamps should be analysed at least once a month, with samples taken from across the whole clamp face. By keeping on top of variation in forage quality, we can then complement forage with suitable concentrates or additives to maintain overall diet consistency.

2) Manage feed delivery

Ensure that you are presenting mixed rations in the most consistent way by not overloading feeder wagons, loading the wagon in the correct order (smallest first) and mixing thoroughly for the same amount of time each day. Structural fibre, such as straw, must be 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.

3) Feed Actisaf® live yeast

Feeding Actisaf® can deliver real benefits when you are facing variable forage in winter, particularly if that silage has high fibre levels. By supporting the growth of beneficial microbes that digest fibre and convert lactic acid to propionate, a key source of energy for the cow, Actisaf® improves feed efficiency and reduces the risk of digestive upset during diet change.

Trials have shown that Actisaf® reduces the bacterial diversity and promotes a more stable bacterial population in the rumen. In particular, Actisaf® supports the growth of beneficial microbes that play a crucial role in digesting fibre, stabilising rumen pH and, more critically, those that impact feed efficiency.

This allows cows to adjust faster onto new diets, including the transition between dry cow and lactation diets, and minimises dips in performance that occur due to smaller differences, such as changes in clamp or adjustments to concentrate feeds. When fed on a continual basis, Actisaf® can also mitigate the effects that forage variability has on rumen bacteria, allowing them to effectively digest feed and supply the cow with the nutrients she needs to perform at her best.

These benefits are reflected in a 2010 trial in which early lactation cows who were fed Actisaf® experienced less of a disruption to milk production after a change in grass silage and on average yielded 1.3 kg more milk per day than comparable cows who were not supplemented (See Figure 2).

Actisaf® also improves feed efficiency of high performing, early lactation cows by up to 5.5% when fed at 10g per day, as found in a 2020 study performed at the University of Nottingham's Centre for Dairy Science and Innovation. Driven by enhanced rumen bacteria performance, energy corrected milk yield significantly increased by 2.8kg per cow (+5.9%), with no increase in feed intakes or negative effects on body condition, fertility, methane emissions or cow health. (See Figure 3)

Through its mode of action, Actisaf® offers many advantages through the winter feeding period, particularly when forages are likely to be highly variable as they are this year for many farmers. By stabilising

rumen function, it helps the cow cope with variation in forages and facilitates better fibre digestion, helping drive milk from forage and minimising setbacks in performance during diet changes.

Figure 2

Effect of Actisaf® on bacterial variability in the rumen of lactating dairy cows

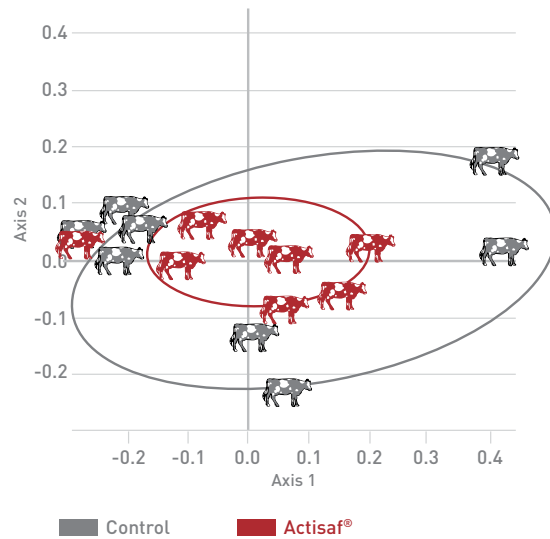
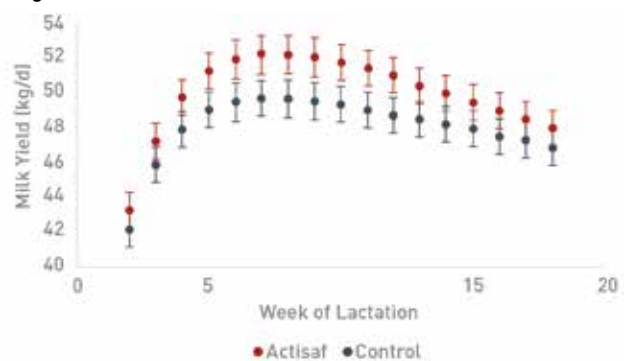


Figure 3

Milk lactation curve



Figure 4



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