



# Maximise the feed efficiency of your herd with Actisaf live yeast

Adding Actisaf live yeast to your dairy rations will:

- Increase fibre digestion and forage utilisation
- Improve dry matter intake and feed efficiency
- Stabilise rumen pH, reducing risk of acidosis
- Enhance production of glucose pre-cursor - essential for fertility and milk production
- Improve milk and milk solids yield
- Reduce bodyweight loss in early lactation



Contact us...

t: 028 9334 3900  
[www.yeastolutions.co.uk](http://www.yeastolutions.co.uk)



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## ACTISAF HELPS RUMEN PERFORMANCE

The inclusion of Actisaf live yeast in the milking and dry cow diets at Little Hook farm in Haverfordwest, South Wales, is helping to maintain the performance of a high-yielding herd.

Dan Evans farms in partnership with his parents, Malcolm and Jane, on the family's 200-acre dairy farm with additional rented land. Their herd of 300 Holstein cows and 200 followers graze outside from April to October. Yields stand at an impressive 10,000 litres rolling average, with butterfat at 4.1% and protein 3.2%.

Milking cows are fed a ration which includes home-grown silage, blend, megalac and straw, along with 50g per head per day of Actisaf Farm Pack. The family first started using Actisaf in the main dairy diet last winter.

"We had quite wet silage last year," explains Dan. "This can be challenging for the rumen so we added Actisaf to help keep the rumen healthy and butterfat stable, and we feel it did the job." This year the silage is looking better, although our second cut is lower in energy and higher in fibre, so we'll be keeping the Actisaf in the diet to help break the fibre down and keep everything stable, all whilst maintaining intakes," says Dan.

Mathew Van Dijk, the farm's feed advisor from Bibby Agriculture, adds; "I first recommended Actisaf to Dan on the back of last year's silage analysis. We were concerned the wet silage could limit

intakes and cause other issues such as acidosis, so we added the Actisaf to stabilise rumen pH and prevent potential problems," he explained.

Actisaf is also included in the dry cow ration on the farm, and Dan has seen some significant improvements over the last two years. "With dry cows, DAs and milk fever could sometimes be an issue," says Dan. "It would be fair to say we didn't have the dry cow diet exactly right and after some research, and as part of other changes to the dry cow diet, we added Safmannan premium yeast fraction to the dry cow ration two years ago and we have seen great improvements - this year we've had no DAs and no milk fever," he explains.

Safmannan supports the dry cow's immune status and future colostrum quality, as well as helping to reduce transition issues and somatic cell counts.

The herd at Little Hook Farm has increased in size from 200 to 300 cows over the last five years, with new building allowing for this progression. "We're now looking to focus on continually improving cow health," says Dan. "We also want to increase litres from forage, and reduce feed costs with the introduction of home-grown forage maize, and we plan to keep the Actisaf in the diet to help us achieve this," Dan concludes.

Contact us...

Tel. : 00 44 28 9334 3900

Fax : 00 44 28 9334 2132



Phileo

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# THE SPRINGBOARD TO A SUCCESSFUL LACTATION - THE DRY PERIOD

The few weeks around the dry and transition period are the springboard for the next lactation, so it is important to focus on cow nutrition and management during this time to avoid production and health issues in the subsequent lactation, including milk fever, retained placentas, DAs, ketosis, high SCC and mastitis and uterine infections.

If possible, target an 8-week dry period (even 10 weeks for first lactation cows if they are under condition) to provide sufficient time to prepare the cow for the next lactation. If cows have had mastitis or high cell counts during the previous lactation then consult your vet on appropriate dry cow therapy, to ensure that udder tissue is repaired during this rest period.

## Body condition

It is very important to body condition score cows in the last 60 days of lactation. Ideally, cows should be dried off at condition score 3.0, as an over- or under-conditioned cow at calving will have lower dry matter intakes, lose more bodyweight in early lactation, show poorer signs of heat and have lower conception rates than a comparable cow calving in at score 3.

Feed intake is king for transition and early lactation cows and cows with a BCS >3.50 at calving are at risk of developing sub-clinical or clinical ketosis, and will be at greater risk of developing displaced abomasum, metritis and retained placenta.

Try to avoid long dry periods on ad lib high quality forages for cows at BCS 3.0. Cows at BCS 2.5 – 2.75 may require five weeks of quality forage with supplementary feeding to get to BCS 3.0. As such, separate cows into management groups where possible based on body condition score to ensure appropriate nutrition.

## Diet and feed

Firstly, it is essential to get forage analysed for major nutrients as well as minerals and trace elements – without that information you simply don't know what you are feeding.

In the first five weeks of the dry period, limit energy intake to 110

MJ ME and increase it to 120 MJ ME for the last 3 weeks pre-calving. Target 1,000 to 1,200 grams of metabolisable protein throughout for foetus growth, repair of tissues in the udder and colostrum formation. Feeding a quality protein source with a high bypass protein content is advisable.

The key objective is to maximise intake of a low energy dry cow ration. Dry matter intake (DMI) will typically be 13kg DM (MJ ME / KG DM) for far-off dry cows at 650kg live weight, although 10 days pre-calving intakes can drop back by up to 30 per cent due to the hormonal changes associated with the onset of calving. Feeding 2 kg of a dry cow nut 3 weeks pre-calving can help prepare the rumen for the lactating diet.

## Calcium

Priming the cow's system to supply adequate calcium post-calving is critical to avoid milk fever in early lactation, and so you need to stimulate the cow to mobilise calcium reserves from her bones. Options include a full DCAD diet for the 3 weeks pre-calving or a partial DCAD diet for the whole dry period. This is achieved by feeding magnesium or calcium chloride to wholly or partially acidify the diet, which promotes calcium mobilisation from the bones.

Where possible, avoid feeding high potassium silages. Silage that received no slurry during the growing season will have a lower potassium content and, if there is no low potassium silage on farm, dilute the potassium content by adding straw, whole crop or maize silage while still formulating to the same energy and crude protein content. Feeding 25-30 grams (50-60 grams cal mag) of magnesium as part of a dry cow mineral is also important, as magnesium plays a central role in calcium signalling within the cow

## Other trace elements

Trace elements such as Selenium, copper, iodine, zinc and manganese are also important in order to avoid metabolic disorders. Vitamins including A, D & E are also essential in order to support immune function, calcium absorption and avoiding issues such as retained placentas.



### **Stress**

It is vital to reduce stress during the dry period, and particularly three weeks pre-calving, as the immune system is compromised at this time and stressed cows will have higher concentrations of adrenaline and cortisol in their bloodstream, which depresses appetite and starts fat mobilisation, which is not required. As such, try to maintain cow groups during the dry period and minimise the need for pen changes and cow movements. It is advisable not to move cows between pens from 10 days pre-calving in order to minimise stress.

### **Housing and environment**

Ensure an adequate supply of clean, fresh water and fresh feed, as well as adequate feed space and a clean, dry comfortable bed. Do not overstock.

Provide 75 cm of head feed space so that all cows can eat together at one time. Dry cows should be provided with 9m<sup>2</sup> (100 sq ft approx.) of lying space in straw yards, or cubicle beds of 1.30 m wide by 2.0 metres long. With cubicle beds do the 'knee drop' test – drop from a standing position on to your knees to determine comfort – if you don't want to do that your cubicles are not providing sufficient comfort for your cows at this critical time!

It is also essential to provide sufficient lighting - you need to be able to read a newspaper in the shed, which is around 300 lux.

When it comes to access to water, there should be one water drinker per 20 cows, which should be cleaned regularly.

### **Preparing the rumen**

By week seven of the dry period the absorptive surface of the rumen has diminished by around 50 per cent, as the rumen papillae shrink during this time. This corresponds with a three-fold increase in the demand for energy between day 250 of the pregnancy and day 4 of lactation, and is further complicated by the reduction in dry matter intake already referred to elsewhere in this article. This can result in negative energy balance and start the process of fat mobilisation.

Dry cow feeding should, therefore, focus on the development of the

rumen papillae, the adaption of the rumen microbial population to the lactating diet (which takes around 3 weeks) and the maintenance of dry matter intake.

Increasing the energy density of the ration by introducing a small amount of concentrate or cereals approximately 2 weeks pre-calving will help develop the rumen papillae, increasing the ability of the rumen to absorb nutrients. The introduction of a limited amount of concentrates will also help acclimatise the rumen microbes to increasing levels of starch in the diet - a reality for cows post-calving when they are introduced to the lactating ration.

### **Adding Actisaf to the diet**

Actisaf live yeast helps condition rumen microbe populations, easing the transition between dry and lactating diets and minimise the risk of digestive upsets such as acidosis during the transition to lactation. Actisaf is the only live yeast scientifically proven to provide a double benefit – increasing fibre digestion in the rumen and also minimising the build up of lactic acid, which is a key contributor to the development of acidosis.

Feeding Actisaf improves fibre digestion, which is particularly important at the transition stage, as it releases more energy from forages, helping to minimise excess body weight loss in early lactation.

### **Adding Safmannan to the diet**

Safmannan is a premium yeast fraction that supports the immune status of the cow, which is useful during late pregnancy and early lactation, when it is otherwise compromised. Supporting the immune status in this way can reduce the risk of high cell counts. When Safmannan is fed for six weeks pre-calving it can support the production of good quality colostrum, which will benefit calves.