



ACTISAF® SUPPORTS HINDGUT FUNCTION IN SUCCESSFUL SHOWJUMPING PONIES

Paul and Angie Proudley keep eight show jumping horses and ponies on Hall Farm in the North York Moors National Park, all of which are ridden by their daughters Sarah, aged 10, and Rachel, 13, as they compete successfully across Great Britain.

Horses and ponies are trickle feeders and hind gut fermenters and as such rely on a healthy population of hindgut microbes to extract nutrients from their feed. They require continuous access to forage and will naturally graze for up to 18 hours a day in order to maintain good physical and mental health, a fact that is strongly supported by both science and the experience of horse owners globally.

However, despite best efforts to maximise turnout time and access to forage, owners of competition horses in particular may still experience challenges that require further attention, specifically with performance horses whose higher energy requirements are met through supplemental feeding.

The horses at Hall Farm are turned out on grass every day, in addition to receiving feed and ample haylage.

In 2017 the Proudleys took on Family Affare, known as "Princess", a 15-year-old, 148 cm chestnut mare sired by Primitive Faerie Tale. Upon arrival to the farm the mare was exhibiting behaviours indicating discomfort, particularly when being girthed up. Princess was later determined to have an imbalance in her hindgut, and they began to search for a cost-effective solution.

"We were told about using active yeast to stabilise the hindgut environment and started to look at different options, and the first product we looked at was £200 for a month's supply! We eventually came across Actisaf® through a veterinary nutritionist and decided to try it out."

"Within a few weeks of her being fed the product, we started to see significant changes in her behaviour. She is much more relaxed

now and is in great physical shape."

Happy with how Princess responded to Actisaf®, the Proudleys decided to see how it could help them address other issues within their team. One of their most successful ponies Painted Lady IV had always been a challenge when it came to maintaining a good body condition, even while in regular work.

"Lady" has had her fair share of successes in the show jumping arena. At the age of 16, the 128 cm skewbald mare has won HOYS, Olympia, and the British Showjumping National Championship with her young jockey at the reins for the last five years.

But despite Lady's obvious athleticism and high level of fitness, her physique has been more pasture pony than athlete. "Our horses are turned out 365 days a year, so she has to wear a grazing muzzle while on grass to keep her from getting too much. But no matter what we did or how much she worked, she's always looked a little flabby."

After seeing the positive effects from Actisaf® with Princess, they decided to add a 10g daily dose to Lady's diet as well and soon saw the results that they were hoping for.

"It has absolutely transformed her. People that have known her for years comment that they have never seen her in shape like this! We feed Actisaf® to all of our horses now and are very happy with how they are doing. We don't plan to remove it from our feed after seeing these changes."



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ACTISAF® LIVE YEAST FOR HORSES – AN INTRODUCTION

As hind gut fermenters, horses digest the fibre in their diet at the end of the digestive system in the caecum and colon. Surprisingly, for an animal whose main diet is grass, a horse can't produce the enzyme needed to break down the cellulose that is present in forages such as grass, hay or haylage. Instead, bacteria microbes release the enzymes as they ferment the cellulose and break it down to produce volatile fatty acids (VFAs), which provide up to 70% of the horse's energy that is required for maintenance.

The impact of starch

A horse is designed to ingest large quantities of forage each day. In fact, horses and ponies can consume up to 4-5% of their body weight (BW) per day if fed ad libitum! This is because horses are, by design, nomadic herbivores and are set up to consume small, fibre-rich meals on an almost continual basis.

Today however, horses are fed diets supplemented with concentrate, or sweet feed, in order to meet the energy demands placed upon them. These diets are often high in starch and can therefore be difficult for the animal to digest due to insufficient amounts of α -amylase, the enzyme needed to break down starch into glucose.

Provided that they are given starchy feeds from balanced sources in small quantities, it is unlikely that a horse will suffer any consequences. This is because a small meal will move slowly through the gut and there will be more time for the starch to be broken down before reaching the hindgut. However, if too much starch is fed it will move through the digestive system more quickly and "dump" remaining starch in the caecum. Bacteria then ferment this starch and produce lactic acid as a by-product, instead of beneficial VFAs.

When lactic acid is produced in the hind gut, the pH tends to drop, resulting in potential health negative complications – this is often referred to as hind gut acidosis. The low pH effectively kills many of the good bacteria that would normally ferment fibre and can eventually cause problems such as caecal and colonic ulcers, colic and laminitis.

How can Actisaf® help?

Feeding Actisaf® live yeast has been shown to improve dry matter digestibility of hay, especially the fibre component. Actisaf® enables the population of good bacteria in the gut to thrive, meaning that

horses fed Actisaf® will digest forage better and therefore benefit from the increased digestion of the nutrients present.

Many performance and racing horses are fed meals high in starch to meet the increased energy demands placed upon them. In vitro studies have found that supplementation with live yeast like Actisaf® reduced lactic acid accumulation (Figure 1) and maintained a more stable pH. This suggests that the yeast appears to exert a buffering effect (figure 2), thus maintaining pH within normal parameters, as well as reducing lactic-acid-producing bacteria.

Figure 1: The effects of Actisaf® (NCYC Sc 47) on lactic acid production, in vitro

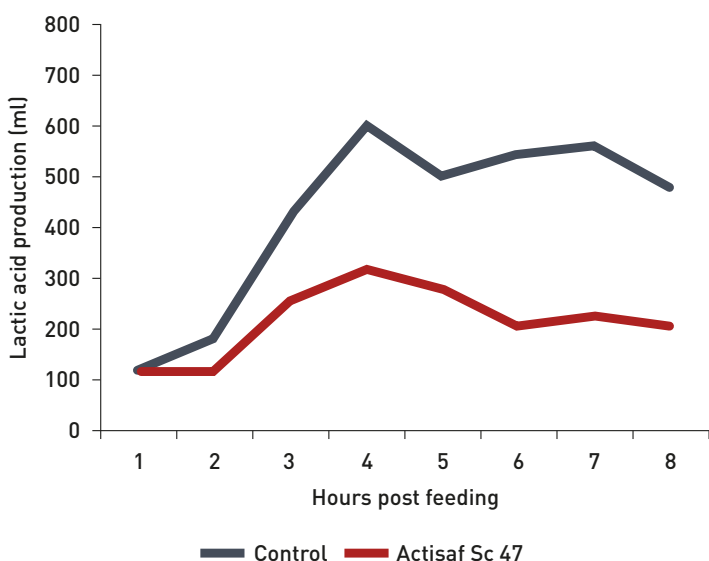
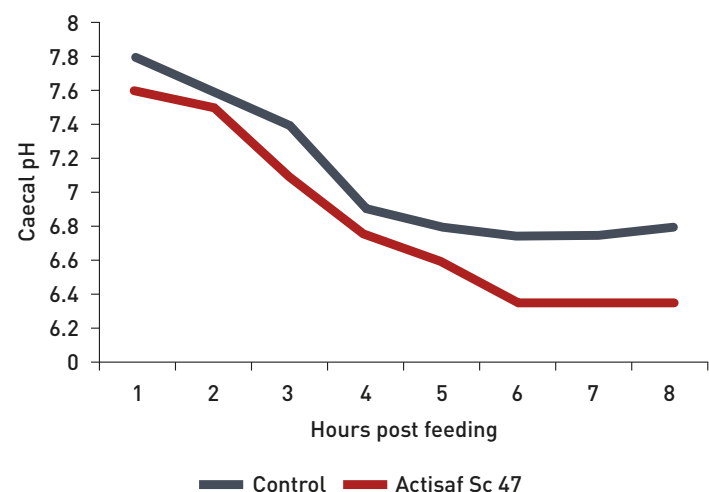


Figure 2: Effects of Actisaf® (NCYC Sc 47) on caecal pH



Actisaf® is suitable for all breeds of horse or pony, regardless of workload. The ideal feeding rate is between 5-20 g/head/day, depending on the age and weight of animal and the current digestive conditions (Figure 3).

Feeding Actisaf® not only increases the digestibility of fibre, but can also reduce lactic acid accumulation and also maintain pH within the normal range of the hind gut, therefore improving both the health and welfare of the horse.

Figure 3: How Much Actisaf® do I feed?

Work level	Dosage rate
HORSE 500g-600kg	
Maintenance/Light work	10g/d (1g/100kg/BW)
Medium work	10-15g/d (1-1.5g/100kg BW)
Hard work	15g/d (1.5g/100kg BW)
Stressful conditions*	25-50g/d (2.5-5g/100kg BW)
PONY 300-400kg	
Maintenance/Light work	10g/d (1g/100kg/BW)
Medium work	10g/d (g/100kg/BW)
Hard work	15g/d (1.5g/100kg BW)
Stressful conditions*	25-50g/d (2.5-5g/100kg BW)

* During periods of stress (e.g competition, transport, dietary change, digestive upset) a higher dose should be used: 10g for leisure animals, 15-20g for performance animals.

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ACTISAF® AIDS RECOVERY FROM HINDGUT ACIDOSIS

When Teresa Basher bought Bess, she was unaware that the gentle black and white gypsy cob was in fact 6 months pregnant. She came to Teresa with a large worm burden, which often manifests as a large “wormy” belly, thus her pregnancy remained undetected. Teresa, who has lived and worked with horses all her life, soon realised something was not quite right and the vet later confirmed what she suspected, that the mare was in foal. Sadly, due to the way Bess was fed and managed in her early pregnancy prior to Teresa buying her, the foal was born with a multitude of health complications and died a few hours after birth.

After this, Bess lost weight very quickly. She started to suffer from itchy, scurfy skin and almost totally lost her appetite. Teresa found out that Bess’s previous owners had tried to substitute her hay with large quantities of starch-rich concentrate foods. As a result, Bess appeared to be suffering from hind gut acidosis.

This was confirmed by measuring Bess’s faecal pH which was 5.7

(A pH of 7 is neutral and acidosis is diagnosed when the faecal pH is below 6.). On the advice of an Equine Specialist, Teresa started to feed Actisaf® to Bess, which has been proven to increase fibre digestion in horses by promoting a healthy bacterial population in the hind gut.

After just 1 week of supplementation with Actisaf®, Bess started to improve. Over the course of the following 8 weeks her appetite increased and she started to put on weight. Her behaviour also improved, something that has been found to be a benefit of feeding Actisaf® to horses. But most importantly, she recovered from the hind gut acidosis that had plagued her for so long. Her faecal pH increased from 5.7 to 6.6, bringing the hind gut environment back within normal parameters.

Teresa and Bess are now competing and are enjoying success in the show ring.

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