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The power of probiotics: a field test.

Helen Sharp shares her experience using autogenous probiotics on her struggling thoroughbred broodmare



BEFORE: The mare just wasn't thriving. Her coat was dull, she seemed irritable and unable to put weight on – she just wasn't 'doing' \ Helen Sharp

AMONGST the noise and brouhaha of the equine (and human) supplement scene, probiotics always intrigued me, could supporting a healthy gut really have such a wide-ranging effect on the horse? There was only one way to find out and that was to try them out.

I have a 13-year-old thoroughbred broodmare, who has lymphangitis and who has had a lot of treatment both at equine hospital and by local vets. She has also had many hours of care at home to stabilise the leg during flare ups and to manage her now permanently big leg.

The management of the condition has involved a lot of vet-led specific antibiotic use and also plenty of anti-inflammatory and painkiller. The leg is now stabilised and gives little bother. The mare has since given birth to a tall, very healthy colt. However, despite a nutritionist-recommended diet, best quality forage, an expensive vitamin and mineral supplement, a huge comfortable pen and all day turn out, the mare just wasn't thriving. Her coat was dull, she seemed irritable and unable to put weight on – she just wasn't 'doing'.

Billions of bacteria known as 'gut flora' inhabit the horse's digestive tract and are essential for breaking down the horse's predominantly fibre diet, to generate energy. Healthy gut flora plays a major role in immunity and prevention of disease.

Protecting the balance between beneficial bacteria and harmful bacteria is vital for the wellbeing of the horse. Following 20 years of extensive gut flora research, the IEC has been able to identify, sensitivity test, isolate and harvest the beneficial bacteria required to balance the horse's gut flora and offer ProSol as a solution.

Regain the balance

Causes of gut flora imbalance include antibiotic treatment, stress, intensive training, diet, viral infections and parasites. I contacted and had a fascinating conversation with Kerrie Kavanagh, senior microbiologist at IEC, who is also completing a PhD on the topic.

Kavanagh is a wealth of information on the subject and her passion for it is infectious – she tells me at this stage she can almost tell a horse's gut flora profile by just looking at it. The gut bacteria is ostensibly a wall of defence, the 'not thriving' is a direct reflection of unbalanced gut flora. If a horse is missing a bacterial species, other bacteria dominate and it causes poor health and often demeanour. Kavanagh tells me that there has been research into dog gut health, which indicates behavioural changes, with the addition of probiotics, dogs became calmer when their gut flora was balanced.

I hadn't realised until talking to Kavanagh that, when it comes to prebiotics (prebiotics feed probiotics), often marketed as another must have, they are actually found naturally in the form of hay and haylage - so you shouldn't necessarily need to supplement a prebiotic at all, forage should do that job.

One of the most interesting things in discussing probiotics was their use as a preventative tool in the wider health of equines – the global threat of antibiotic-resistant bacteria is a very urgent one and a problem which is showing up more and more frequently in Irish labs. Research is showing that if, when you need to treat with an antibiotic, you also treat with a probiotic at the same time, it has a buffering affect on the gut and can possibly lead to lower antibiotic resistance, that's good for horses but ultimately within the One Health context, it's good for us humans too. _____ .

To begin the process of the bespoke probiotic, I had to collect a dung sample from the mare and send it in to IEC via next day delivery. Autogenous probiotics are made from good bacteria harvested from the animal's own faeces.

The sample was read and a culture result sent to me via email, which showed that my mare had a very light growth of Escherichia coli, a heavy growth of Alpha-haemolytic Streptococcus sp., a moderate growth of Staphylococcus sp and a very light growth of Bacillus sp. The report stated that the gut flora was indeed out of balance and recommended the autogenous probiotic for her. My mare sample did not show the presence of antibiotic-resistant bacteria, which for me was wonderful to know given her vulnerable condition and frequent need of antibiotics over the last 24 months.

Very best objective

Once I agreed to proceed with the probiotic, it was with me within a few days and the dose was 100ml for an adult horse per day (50ml for foals). The pink coloured liquid dose was to be administered orally or in food for 20 days. The mare did not protest at all at dosing and, within a week, even with my very best objective eyes on, I had to admit to noticing a difference in the mare's coat, it began to have a shine that had been lacking, her eye was brighter too.

After two weeks, weight gain was undeniable and the 'grumpy' mare we'd had for a while was softening and she seemed more content.

After the full course, as highlighted in the before and after photographs, despite her leg condition and despite feeding her colt, and with no change to her feed or daily routine whatsoever, the mare was turned inside out, her weight gain was significant, her mood improved, her coat was beautiful and my healthy happy mare had returned.

Using cryopreservation, the IEC can store each horse's beneficial bacteria in a secure bank for the duration of the horse's life, providing a safety net for the owner. In the case of an adverse event in the gut, e.g. antibiotic treatment or parasitic infection, the IEC is able to retrieve the stored bacteria and quickly formulate a ProSol probiotic for your horse.



Before



After