

QUESTION: Is a live yeast probiotic and MOS/betaglucan prebiotic beneficial to horses with hindgut dysfunction?

Background

- Dysfunction and disease of the gastrointestinal (GI) tract is common in horses with colic being the most severe¹⁻³. Identified risk factors for colic include change in stabling conditions, recent change in diet and level of activity, decreased exposure to pasture, lack of access to water and transport^{3,4}.
- Low-grade hindgut disturbance and change in hindgut microbial populations can be caused by high starch diets and abrupt dietary change^{4,6}. Such shifts in microbial populations can decrease the efficiency of food digestion⁵ and the metabolism and absorption of vitamins and minerals.
- Yeast has been proposed to support GI microbial populations in a number of species, reducing the risk of GI problems, acidosis and increasing digestibility⁷. Similarly, yeasts may be able to beneficially modify large intestine function in the horse^{5,6,8,9}.

Aim of Study

To develop a nutritional supplement (Gut Balancer, Science Supplements) supporting hindgut function in the horse. Primary requirements in development of the supplement were effectiveness and safety.

Study Design

- *Prospective clinical case series* = a group of horses selected for a particular reason (loose droppings in this study) was followed over several weeks.

Study Outline

Twenty-nine horses with chronic (over 4 weeks) loose droppings were recruited. Loose droppings were chosen as an indirect measure of large intestinal function/dysfunction as they require no owner intervention and are readily observable. It was hypothesised that improvement in large intestinal function would be reflected by better consistency droppings. Owners recorded faecal consistency each day using a simple 5-point scale for scoring the consistency of the droppings (0 liquid; 1 semi-liquid; 2 soft; 3 normal; 4 hard). Each score was accompanied by a photo to try to improve consistency in scoring over time and between different owners taking part in the trials. Owners were instructed to feed 40g of live yeast probiotic and MOS/betaglucan prebiotic (Gut Balancer) per day, split between two feeds. If no change in faecal score was observed in 7 days, 80g of Gut Balancer (2 x 40g) was administered daily for a further 7 days.

Study Results

- Improved faecal consistency within 7 days was reported for 24/29 (83%) horses with loose droppings. Faecal scores were significantly improved after 2 days of feeding Gut Balancer (Figure 1).
- Normal faecal consistency was achieved in 15/29 (52%) horses. Five horses (17%) did not respond with a change in dropping score in the first 7 days. These horses were fed 80g supplement daily for a further 7 days resulting in 4/5 (80%) producing normal droppings.

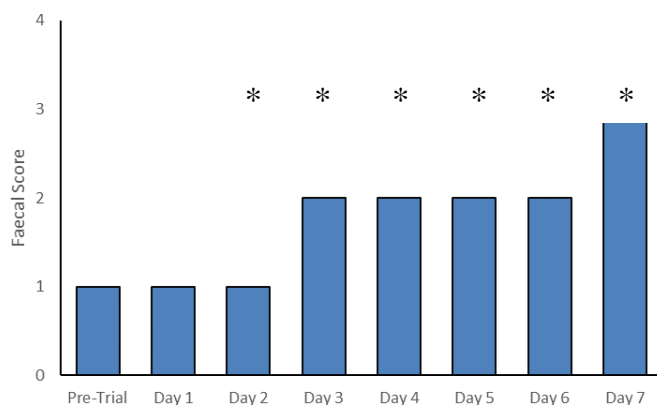


Figure 1. The effect of feeding Gut Balancer (40g per day) on median owner-recorded faecal score in 29 horses with loose droppings. Faecal score: 0 liquid; 1 semi-liquid; 2 soft; 3 normal; 4 hard. * shows significant difference in median faecal score from pre-trial ($P < 0.03$).

References

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