

# Owners perception towards the effect of an adjusted diet on symptoms of insect bite hypersensitivity in horses: a field study.

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## INTRODUCTION

Diets based on a small amount of complementary feed or roughage only, often do not meet the animals nutritional requirements. Suboptimal diets can have a negative impact on the immune status in the long term<sup>1</sup>. Especially horses with immune disorders, could be more sensitive to imbalanced diets. The aim of this preliminary field study was to investigate if a well-balanced diet with additional immune supporting ingredients would reduce symptoms in horses with insect bite hypersensitivity (IBH), according to the horse owners.

## METHODS

A total of 23 horses suffering from IBH were selected. Their current diets were compared with the Dutch equine nutritional requirements (CVB). For 3 months, from spring to early summer 2016, the horses received a supplement with additional trace elements and vitamins plus beta-1,3/1,6-glucans (MacroGard<sup>®</sup>) and essential fatty acids (DHA Gold<sup>®</sup>) on top of a complementary feed (Bonpard Colon<sup>®</sup>). Horses were compared by their owners to the IBH symptoms in the same period in 2015. Weekly the owners recorded general health aspects of the horse, personal experiences and the severity of symptoms of IBH for different regions of the horse (fig. 1).

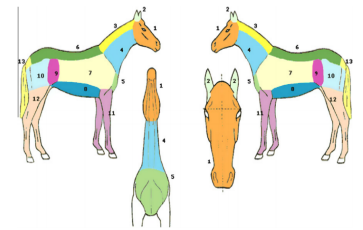


Figure 1. Type of symptom and range of expression per zone was weekly scored by horse owners. (Eriksson et al, 2008)

## RESULTS

More than 60% of the horses with IBH received a diet that did not cover the nutrient requirements before starting the trial. For the mane region, 95,4% showed signs of IBH in 2015 and 56,1% in 2016 (fig. 2). The number of large wounds in the mane was 22,7% in 2015 and 3,0% in 2016. Results for the tail region were similar. More than 50% of the horse owners mentioned better skin health and wound healing at the end of the trial period. Also the behaviour of the horses was positively improved in 17,5%, probably as a result of less stress and itching (fig. 3).

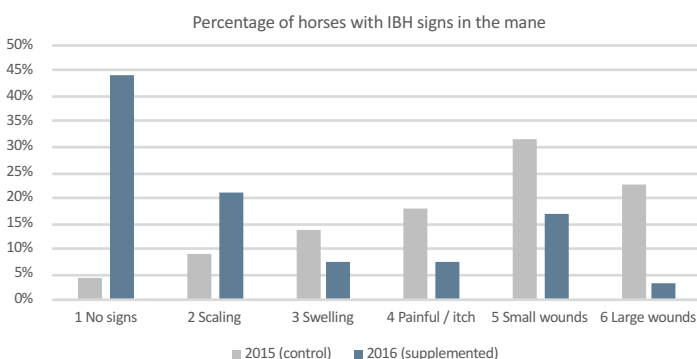


Figure 2: Symptoms of IBH in manes of the horse in the research period compared to in the same period in year before (2015), scored by the horse owners (n=23).

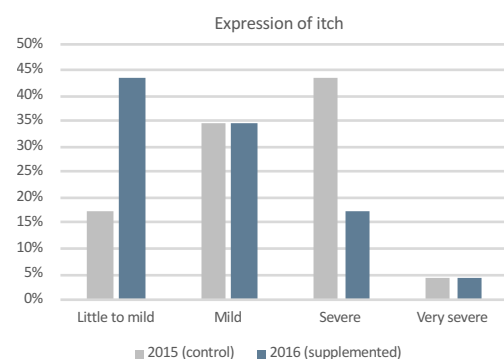


Figure 3: Expression of itch of the participating horses in the research period compared to the same period in 2015, scored by the horse owners (n=23).

## CONCLUSION

Limitations in this field study may leave the possibility for bias and should be interpreted with this in mind. However, the results suggest that owners of horses with IBH, experienced reduced clinical signs after dietary changes. This field study indicates the link between nutrition and immune related disorders, and could be a base for further research.