



2015 EquiBrew Windsucker Project

Introduction

“Crib-biting and windsucking are two common forms of equine stereotypic behaviour. By definition stereotypes are repetitive, relatively invariant patterns of behaviour with no apparent goal or function. They are often associated with historic or current sub-optimal environments and have been used as an indicator of welfare.

Crib-biting in horses is defined as the repeated seizure of fixed objects with the incisor teeth and pulling back while making a characteristic grunting noise. Windsucking is similar but the horse achieves the same posture and makes the same noise without grasping a fixed object. The reported prevalence of crib-biting/windsucking behavior in captive domestic horses ranges from 2.1-10.5%” (Escalona et al, 2014)

Since the launch of EquiBrew in August of 2014, the product has been reported by horse owners to quiet horses and reduce the severity of stereotypic behaviours. We note EquiBrew is novel in the marketplace as a fresh fermentation product with a limited shelf life that contains high numbers of live, active probiotic microbes (minimum 10^8 CFU/ml lactobacilli) and a complex of metabolites including organic acids (butyric acid, lactic acids, acetic acid, their esters, etc). We theorize that the novel (for the marketplace) characteristics of the product produce the effects described herein.

Because crib-biting appears to be effectively a subset of windsucking we refer below only to windsucking without differentiating crib-biting. Further, horse owners participating in the project used both terms interchangeably and no attempt was made to confirm the literal accuracy of the terms chosen to describe observed behaviours.

Method

In February 2015, horse owners were invited via Facebook to participate in a project to look into the potential of EquiBrew to alleviate windsucking.

Participants were self-selecting with the only criteria for participation being that they agree to follow the protocol and fill in an initial application form and trial log sheet and have a horse exhibiting what they describe as stereotypic windsucking behaviours.

Some 20 candidates filled in the original questionnaire and 14 completed the course of product administration and returned the daily log sheet reporting their observations. Most participants also supplied photographs of the horses at the start and conclusion of the project.

Horses included in the trial were to receive 200ml EquiBrew twice daily (400ml total) for five days and 200ml per day (in either one dose or split into two, depending on owner's feeding/care regime) for nine days thereafter. The product could, at the horse owner's discretion, be syringed directly or mixed into feed. Most elected to mix the product into feed.

Results

At the end of day 5 windsucking had decreased, on average, by 40% ($p=0.0013$) from a range of 2-10 to a range of 0-9 with three 0 improvement reported. No horses got worse (see Table 1)

At the end of day 14 windsucking had decreased, on average, by 33% ($p=0.0012$) with a range of 0-10 and two 0 improvement reported. No horses got worse (see Table 1)

(p values obtained via a paired two sample t-test)

Table 1

Owner scored severity of windsucking on a scale of 0 to 10 (10 being frequent/constant and 0 being absent), prior to administering EquiBrew, at day 5 and at day 14, the end of the experiment.

Horse	Severity at start	Severity at day 5	Severity at day 14
1	9	6	8
2	8	5	7
3	7	1	3
4	7	4	3
5	8	6	7
6	2	2	2
7	7	2	0
8	5	4	4
9	6	2	0
10	9	8	8
11	10	9	10
12	8	8	7
13	10	0	6
14	2	2	1
MEAN	7.00	4.21	4.71

A range of other effects were noted by the horse owners (although the project was not designed to score or track these effects) during the trial. These effects include improvements in the horse's behavior (in general and in connection with the consumption of feed), improvements in condition, and shinier coats.

Overall there appears to be a significant change (reduction) in stereotypic windsucking behaviours. It also appears that certain horses had greater responses to the higher initial dose while others appeared to respond to the course of administration over the longer period of the entire program. Further, the horses appeared to have a range of responses which varied considerably and which were considered to be positive effects by the horse owner. Finally, a subjective review of the photographs appears to show visible improvement in the condition in the majority of the horses, in the form of weight gain, coat luster, or both.

Conclusion

Administration of EquiBrew appears to have a beneficial effect on stereotypic windsucking behaviours.

Administration of EquiBrew also appears to produce other effects considered beneficial by horse owners but this project did not investigate or score these in a structured manner as was the case with stereotypic windsucking behaviours.

More work is required to confirm the above and to determine the correct dosages for optimal results.