

## The effect of a novel complementary feedstuff on canine faecal consistency and odour

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**Introduction** Poor faecal consistency, malodour and excessive or erratic volume are common conditions in companion animals and can present unpleasant situations for owners and handlers. The ratio of water to solids in faeces is an important determinant of faecal consistency but does not always result in poor faecal consistency (Wenzl *et al.*, 1995). Gastrointestinal tract function is also implicated in poor faecal consistency and nutritional intervention is one approach to management of the problem (Hickman 1998). The aim of the current study was to determine owner perceptions of the efficacy of a novel complementary feedstuff on dog faecal quality and a variety of canine parameters.

**Materials and methods** Twenty-one dogs, aged between 1 and 12 years, with body weights ranging from 2.5 to 40.0kg were used in the study. The dogs were randomly assigned to two treatments (feedstuff and control) in a standard cross-over design with a 21 day feeding period. The complementary feedstuff, a mixture of short, medium and long chain fatty acids all of which are encapsulated to reach the hind gut, was included at levels proportionate to the weight of each dog (0.3g/kg). Fresh water was available at all times. Faecal characteristics (consistency, volume, odour, colour and ease of pick up) and coat shine, breath odour and flatulence were scored by owners at weekly intervals throughout the trial, using a 5 level likert scale questionnaire design. Fresh faecal samples were collected for microbiological analysis after 21d. Microbial counts were obtained by plating out decimal dilutions of samples prepared in maximum recovery diluents. Standard media were used throughout. All statistical analyses were performed by ANOVA, using Genstat.

**Results** The current study demonstrated significant differences ( $P < 0.05$ ) in all parameters evaluated within the questionnaire and Enterobacteria levels between the two treatments determined through microbiological analysis tended to be different ( $P < 0.10$ ).

**Table 1** Treatment effects on owner perception on fresh faecal quality and other canine parameters

Parameter	Pre treatment (control)	Treatment	Post treatment (control)	<i>P</i>
Coat shine* (1-5 ≡Dull-Shiny)	3.1	3.6	3.6	0.003
Breath odour* (1-5 ≡Weak-Strong)	3.7	2.1	3.5	<.001
Feed intake* (1-5≡Low-High)	3.0	3.3	3.2	0.018
Flatulence* (1-5≡Never-Frequent)	2.8	2.5	2.7	0.003
Faecal Volume* (1-5≡Little-A lot)	1.9	2.4	2.1	<.001
Faecal colour (1-5≡Light-Dark)	3.7	2.7	3.6	<.001
Faecal odour (1-5≡Weak-Strong)	4.1	2.2	3.8	<.001
Faecal consistency(1-6≡Firm-Liquid)	4.1	3.1	3.7	<.001
Faecal pick up (1-5≡Easy- Difficult)	3.3	2.1	2.6	<.001

\*16 dogs included

**Table 2** Effect of treatment on faecal bacterial concentration (in log colony forming units per g)

Parameter	Treatment	Control	<i>P</i>
TVC	7.68	7.64	0.418
Entero	6.31	6.63	0.075
Lactics	7.36	7.58	0.345
Cl_perf	7.45	7.42	0.874
Total anaerobes	8.27	8.35	0.838

**Conclusion** Inclusion of a novel complementary feedstuff in canine diets decreased breath odour, flatulence and faecal odour in the dogs. Owners also recorded a significant improvement in coat shine, faecal consistency and ease of faecal pick up but there was a significant increase in faecal volume and feed intake. The feedstuff reduced Enterobacteria in the faeces, which may associate with a change in gut health and function.

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