

T64 Evaluation of a mixture of *Bacillus amyloliquefaciens* CECT 5940 and *Enterococcus faecium* CECT4515 in adult healthy dogs.

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Probiotic supplementation has demonstrated beneficial effects such as reestablishment of unbalanced intestinal microbiota, enhanced resistance to colonization by enteropathogens and improving intestinal barrier, among others. The objective of this study was to evaluate the potential effect of a mixture of 2 probiotic strains (*Bacillus amyloliquefaciens* CECT 5940 and *Enterococcus faecium* CECT 4515 at 5×10^8 cfu/g each strain) in adult healthy dogs. Sixteen beagles (8 males and 8 females; between 1 and 7 years of age) housed at the UAB facilities were used. Animals were divided into 2 groups of 8 dogs: control (T1) and treatment (T2) group received daily 1 g of probiotic mixture per kg of the same dry diet for 39 consecutive days. Daily food consumption, weekly body weight and body condition score and fecal score (3 times a week) were assessed as health indicators. Fresh fecal samples were collected on d 1, last day of supplementation period (d 39) and after a withdrawal period of 6 d (d 45). By means of conventional plating methods, total aerobic mesophilic bacteria, Enterobacteriaceae spp., *Escherichia coli*, *Clostridium perfringens*, lactic acid bacteria and the 2 probiotic strains were analyzed. Fecal pH was determined. Total fecal samples were collected during 6 d to perform a digestibility trial during the supplementation period according to FEDIAF (2008). Differences were tested by PROC MIXED (SAS, 2002). The 2 probiotic strains were recovered after the supplementation period from fresh fecal samples, but not after the withdrawal period. No statistical differences were detected in any health indicators measured or in digestibility coefficients. No statistical differences were found in microbiota analyzed. However, *C. perfringens* counts were significantly reduced in T2 after the supplementation period (5.64 vs. 2.94 ± 0.53 log cfu/g feces; $P < 0.0001$). Bacterial counts were in the same range as baseline after the withdrawal period and no differences were detected in fecal pH. The use of probiotics could stabilize dog fecal microbiota, by decreasing pathogenic populations.

Key words: dogs, microbiota, probiotic

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