



## The Effect of Dietary Supplementation with Propolis on Bacteria Colonization Pattern in Gastrointestinal Tract of Broiler Chickens

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Received/Geliş Tarihi: 08/10/2018, Accepted/ Kabul Tarihi: 19/10/2018

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### Abstract

Recent studies have suggested an increase in the production performance in poultry fed diets with propolis<sup>1,2</sup>. This advantages could be related to effect of propolis on gastrointestinal microbiota which increase the levels of beneficial bacteria and decrease the pathogenic types<sup>3</sup>. The aim of this study was to determine the total bacterial count, the count of *Lactobacillus* genera and the count of *Enterobacteriaceae* genera in ileum and crop of broiler chickens. This experimental study was conducted on 120 Ross 308 broiler chickens of equally distributed sex, which were randomly divided into three groups: control group (C) and two experimental groups of chickens (P1 and P2). Throughout the whole study (for 42 days) the control group of chickens was fed feed mixture while feed mixture that was fed to the experimental groups of chickens contained propolis in amount of 0,5 g/kg (P1 group) and 1,0 g/kg of feed mixture (P2 group). The study revealed statistically significant difference in number of *Lactobacillus* genera in ileum ( $p=0.036$ ) between control and experimental groups of broiler chickens while there were no statistically significant differences in total bacterial count ( $p=0.351$ ) and in number of *Enterobacteriaceae* genera ( $p=0.990$ ). The study further showed statistically significant difference in number of *Enterobacteriaceae* genera ( $p=0.043$ ) in crop between control and experimental groups of broiler chickens while there were no statistically significant differences in total bacterial count ( $p=0.066$ ) and in number of *Lactobacillus* genera ( $p=0.558$ ). One can conclude that dietary supplementation with propolis influence the colonization patterns of gastrointestinal tract of broiler chickens.

### References:

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