

## Effects of Palm Kernel Expeller Processing on the Ileal Populations of Lactobacilli and Escherichia Coli in Broiler Chickens

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**Abstract :** The main objective of this study was to examine the effects of enzymatic treatment and shell content of palm kernel expeller (PKE) on the ileal Lactobacilli and Escherichia coli populations in broiler chickens. At the finisher phase, one hundred male broiler chickens (Cobb-500) were fed a control diet or the diets containing 200 g/kg of normal PKE (70 g/kg shell), low shell PKE (30 g/kg shell), enzymatic treated PKE or low shell-enzymatic treated PKE. The quantitative real-time PCR were used to determine the ileal bacteria populations. The lowest ileal Lactobacilli population was found in the chickens fed the low shell PKE diet. Dietary normal PKE or low shell-enzymatic treated PKE decreased the Escherichia coli population compared to the control diet. The results suggested that PKE could be included up to 200 g/kg in the finisher diet, however, any screening practice to reduce the shell content of PKE without enzymatic degradation of  $\beta$ -mannan, decrease ileal Lactobacilli population.

**Keywords :** palm kernel expeller, exogenous enzyme, shell content, ileum bacteria, broiler chickens

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