

**PROTEIN DIGESTIBILITY AND SMALL INTESTINE VILLOUS
HEIGHT OF LAYING HENS ADDED SUPPLEMENTATION
PROBIOTIC-*CHLORELLA***

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ABSTRACT

This study was conducted to evaluate the effects of layer diets added Probiotic-*Chlorella* on the protein digestibility and intestinal epithelial surface. Twenty-eight *Lohman's* strain laying hens were randomly divided into four dietary treatments and seven replicates per treatment. The control group (P₀), were fed layer ration containing 18% protein. The others were fed a "low protein diet" containing 14% protein (P₁); a low protein diet supplemented with 5% Probiotic (P₂) and another supplemented with 5% Probiotic-*Chlorella* (P₃). The experimental diet were fed for eight weeks and then the hens were sacrificed. Sample of intestine were removed and the measurement of each villous intestine segment were examined with microscope. In the other to determine of digestibility protein, the fecal protein concentration were analyzed by macro-Kjeldhal method. The result of the experiment showed that the protein digestibility of diet supplemented with Probiotic and Probiotic-*Chlorella* were highly significantly ($p < 0,01$) better than the low protein diet. The Probiotic-*Chlorella* supplementation of the diet were also highly significantly ($p < 0,01$) increased the height of villous intestinal segments.

Key words : Probiotic, *Chlorella*, protein digestibility, villous height.