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

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ABSTRACT

This study was conducted to evaluated 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 devied 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 suplemented with Probiotic and Probiotic-Chlorella were highly significantly (p<0.01) better than the low protein diet. The Probiotic-Chlorella suplementation 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.