

***Effect of Supplementing Rations with Spirulina (Arthrospira platensis)
and Bile Acid on Physical Egg Quality***

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ABSTRACT

This study aimed to determine the effect of supplementing rations with Spirulina (Arthrospira platensis) and bile acid on physical egg quality. The research was conducted in Antirogo, Summersari, and at the Livestock Production Laboratory of the State Polytechnic of Jember. An experimental method was employed using a Completely Randomized Design (CRD) and Analysis of Variance (ANOVA). If significant differences were found among treatments, Duncan's Multiple Range Test (DMRT) was performed. The study utilized 20 Lohmann strain laying hens, with four treatments and five replicates. The treatments were: P0 (control), P1 (1 g/kg bile acid), P2 (1 g/kg Spirulina), and P3 (1 g/kg Spirulina cultured with added bile acid). The parameters observed were egg weight, albumen index, yolk index, yolk color, pH, shell thickness, and Haugh Unit. The results indicated that the supplementation of Spirulina and bile acid had a significant effect ($P < 0.05$) on egg weight and pH, but did not have a significant effect ($P > 0.05$) on albumen index, yolk index, yolk color, shell thickness, or Haugh Unit.

Keywords : *Arthrospira platensis, bile acids, laying hens, physical egg quality, Lohman strain*