

The Effectiveness of Synbiotics Based on Natural Prebiotics from Tamarind Seeds (*Tamarindus indica* L.) on the Evaluation of Broiler Chicken Nutrients

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ABSTRACT

*The use of antibiotics can cause residues in poultry products and have a negative impact on consumers if consumed. The use of natural prebiotic-based synbiotics as an alternative to antibiotics because it is not harmful and safe. This study aims to determine the effectiveness of synbiotics based on natural prebiotics from tamarind seeds (*Tamarindus indica* L.) on nutrient evaluation of broiler chickens. The study consisted of five treatments with different doses of probiotics and prebiotics, that is P0 (control), P1 (2 ml probiotic + 2 g prebiotic), P2 (2 ml probiotic + 4 g prebiotic), P3 (4 ml probiotic + 2 g prebiotic), dan P4 (4 ml probiotic + 4 g prebiotic). This study used 200 broiler Cobb chickens. Each research treatment consisted of four replications and each replication consisted of 10 chickens. The parameters observed were the adequacy of metabolic energy and protein requirements in broiler chickens. This study uses an experimental method with the experimental design used is a completely randomized design (CRD) with a unidirectional pattern, if there is a difference in the mean of treatment, it is continued with the Duncan Multiple Range Test (DMRT). The results showed that the addition of natural prebiotic-based synbiotics from tamarind seeds in the feed provided a significant increase in the adequacy of energy metabolism requirements in treatment 4 with the value of the starter phase 2.365,0 kcal/kg and the finisher phase 2.342,5 kcal/kg but did not affect the adequacy of broiler protein requirements in the starter phase and finisher phase.*

Keywords: *Nutrient evaluation, Broiler, Probiotic, Prebiotic, Tamarid*