The Blood Profile of Indonesian Native Chickens that Reared in Semi-Intensive System

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Abstract. The objective of the study was to evaluate the blood profile of Indonesian native chickens reared in a semi-intensive raised system. A total number of 68 chickens from four strains (Red *Lurik*, *Wareng*, *Ranupane*, and *Putih*) were used as samples. Chickens were challenged for 14 d in a semi-intensive raised system. Blood sampling was obtained from the pectoralis vein of the wing. The ANOVA and Duncant's test were applied for data analysis. The observed variables consist of hemoglobin, erythrocytes, hematocrit, total blood plasma protein, leukocytes, and leukocyte differentiation. The results showed that chicken strains had a very significant difference ($P < 0.01$) in blood protein and hematocrit variables, a significant effect ($P < 0.05$) on hemoglobin levels, and no difference ($P > 0.05$) on the number of erythrocytes, leukocytes, and leukocyte. The highest hemoglobin level was found in the *Ranupane* strain (13.48 g dL^{-1}). The highest blood protein and hematocrit values were found in the *Putih* strain at 7.60 g 100 mL^{-1} and 42.45 %, respectively. In conclusion that chicken strains of *Lurik, Wareng, Ranupane,* and *Putih* have different blood profiles (hemoglobin, blood protein, hematocrit, erythrocytes, leukocytes, and leukocyte differentiation). Consequently, the native chicken strain was normal even in a reared semi-intensive system.

Keywords: Chicken strains, *Gallus domesticus* (Linnaeus, 1758), *putih* straints, *ranupane* straints, red *lurik* straints, *wareng* straints.

1 Introduction

Native chicken [*Gallus domesticus* (Linnaeus, 1758)] is one of the original Indonesian Germplasm. This chicken is dual function because it can be used for both meat and eggs [1–3]. One of the characteristics of this chicken is that it is easy to adapt to the environment in Indonesia, making it easier to maintain. Free-range chicken strains include *Lurik*, *Wareng*, *Ranupane*, and *Putih* strains. These chicken strains come from different regions.

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