

## ABSTRACT

Ribki El Fahmi. 24020120120002. Evaluation of Kidney Structure and Erythrogram in Hybrid Ducks after Supplementation with Moringa Leaf Powder (*Moringa oleifera* Lam.). Under the guidance of Sunarno and Kasiyati.

Low-quality nutritional feed could cause growth and health issues such as changed in kidney structure and erythrogram in hybrid ducks. Moringa leaf powder contained antioxidants and completed nutrients that had the potential to be used as a feed supplement to support the growth and health of hybrid ducks. The antioxidant content in Moringa leaves, such as flavonoids, saponins, tannins, and alkaloids, could prevent necrosis in kidney structure. Nutrient components in Moringa leaves, such as proteins and vitamins, played a role in blood cell proliferation and differentiation. Previous research shows that the addition of moringa leaf flour could maintain kidney structure and erythrogram of duck, making it safe to used as a feed supplement. The purposed of this study was to analyzed the effect of Moringa leaf powder supplementation on the kidney structure and erythrogram of hybrid ducks. This study used a Completely Randomized Design consisted of 4 treatments, included K0 (feed without Moringa leaf powder), K1, K2, and K3, respectively, feed treatments with the addition of 2,5%, 5%, and 7,5% Moringa leaf powder. The treatment was repeated 6 times each. Kidney structure measurement variables included renal corpuscle diameter, renal corpuscle density, proximal tubule diameter, and distal tubule diameter. Erythrogram variables included erythrocytes, hemoglobin, hematocrit, MCV, MCH, and MCHC. Data were tested and analyzed by ANOVA with a significance of 5%. The results of the study showed that Moringa leaf powder supplementation did not affect the kidney structure and erythrogram of hybrid ducks ( $P>0,05$ ). The conclusion of this study was that *Moringa leaf* powder supplements potentially maintained the structure of the kidney, included renal corpuscles, proximal tubules, and distal tubules, and maintained the erythrogram, included the number of erythrocytes, hemoglobin levels, hematocrit, MCV, MCH, and MCHC, thereby maintained the physiological status of ducks healthy.

**Keywords:** *renal corpuscle, proximal tubule, distal tubule, erythrocytes*