

ABSTRACT

Ilham Istaputra. 24020121130117. Somatometry and Histomorphometry of the Musculus Tibialis of Hybrid Duck Embryos After In Ovo Injection of Vitamin E and Selenium. Under the guidance of Kasiyati and Silvana Tana.

Hybrid ducks were a type of poultry with great potential, capable of adapting to the local environment. The research focused on optimizing hatching, for example, using in ovo feeding technology with vitamin E and selenium, to produce higher-quality Day Old Duck (DOD). The objective of the study was to analyze the somatometry and histomorphometry of the tibialis muscle of hybrid duck embryos after in ovo injection of vitamin E and selenium. The research was conducted over a period of 6 (six) months. Histological preparations were made using the paraffin method and hematoxylin-eosin staining. This study employed a Completely Randomized Design, using 48 eggs divided into four groups, with each group consisting of 12 eggs and four treatments: control (K0), injection of 0.89% physiological saline solution (K1), in ovo injection of 0.1 mL of vitamin E+Se (K2), and in ovo injection of 0.15 mL of vitamin E+Se. The quantitative data obtained in this study were analyzed using ANOVA ($\alpha = 0.05$). Significant ANOVA results were followed by post-hoc tests using Duncan's multiple range test. This study yielded significant results ($P < 0.05$) for metatarsus length and muscle fiber diameter of the embryo, but non-significant results ($P > 0.05$) for beak length, neck length, body length, tibia length, and muscle fiber count. The conclusion of this study was that the administration of in ovo injections of vitamin E and selenium to 14-day-old hybrid duck embryos had the potential to optimize tibialis muscle proliferation, without increase somatometric growth.

Keywords: *poultry, hatching performance, Day Old Duck, tibia muscle.*