

Comparison of the Physical Quality of Duck Eggs Under Intensive and Semi-Intensive Rearing at Mulya Duck Farm, Lumajang

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ABSTRACT

This study aims to compare the physical quality of Mojosari duck eggs under intensive and semi-intensive rearing systems at Itik Mulya Farm, Lumajang. A total of 800 ducks with an average age of 22 weeks were used in this study. The background of this research is based on the assumption that different rearing systems influence egg quality in terms of weight, shape, and internal components. The study was conducted using an experimental method with a Student's t-test applied to two treatment groups with 30 replications. The observed parameters included egg weight, egg index, yolk index, albumen index, eggshell thickness, and Haugh Unit (HU). Data were analyzed to determine the differences between treatments. The results showed significant differences ($P < 0.05$) in egg weight, egg index, and eggshell thickness. Eggs from the intensive system had higher weight and larger egg index, whereas eggs from the semi-intensive system had thicker eggshells. Meanwhile, albumen index, yolk index, and Haugh Unit did not show significant differences ($P > 0.05$). The average HU value obtained was 80, which is categorized as fresh according to the Indonesian National Standard (SNI 3926:2008). It can be concluded that the intensive system produces eggs with better weight and shape, while the semi-intensive system produces thicker eggshells. Both systems are capable of producing eggs with good internal quality and HU values that meet SNI standards, making them suitable for consumption and maintaining economic value. The results of this study are expected to serve as a consideration for farmers in choosing rearing systems according to their conditions and production goals.

Keywords : *Duck Mojosari, intensive system, semi intensive system, egg physical quality*