

***The Effect of Probiotic Supplementation of Lactobacillus Sp. and Bacillus Sp.  
on the Microscopic Quality of Native Chicken Sperm  
Under Intensive Rearing System***

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**ABSTRACT**

*This study aimed to determine the effect of probiotic supplementation of Lactobacillus Sp. and Bacillus Sp. on the microscopic quality of native chicken sperm, including sperm concentration, viability, and abnormalities. This research was conducted from August to November 2024 at Politeknik Negeri Jember using a Completely Randomized Design consisting of 4 treatments and 8 replications. The treatments consisted of feed without probiotics (P0), feed + 1% Bacillus Sp. (P1), feed + 1% Lactobacillus Sp. (P2), and feed + 1% combination of Lactobacillus Sp. and Bacillus Sp. (P3). The observed parameters included sperm concentration, viability, and abnormalities. The obtained data were analyzed using One Way ANOVA followed by Duncan Multiple Range Test (DMRT). The results showed that probiotic supplementation of Lactobacillus Sp. and Bacillus Sp. had no significant effect ( $P > 0.05$ ) on sperm concentration, but had a significant effect ( $P < 0.05$ ) on sperm viability and abnormalities of native chickens. The combination treatment of Lactobacillus Sp. and Bacillus Sp. (P3) produced the highest average sperm viability of 97.07% and the lowest average sperm abnormality of 14.76%. Based on the results, it can be concluded that supplementation of Lactobacillus Sp. and Bacillus Sp. was able to improve sperm viability and reduce sperm abnormalities, but had not yet shown a significant effect on increasing sperm concentration.*

**Keywords:** *native chicken, probiotic, Lactobacillus Sp., Bacillus Sp., sperm.*