Differences of antibody titer to avian influenza and hematology profile on local ducks in Central Java

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Abstract	Avian Influenza (AI) in poultry farms in Indonesia is still a threat to the sustainability of livestock and farmers. Duck is one of the most heterogeneous natural reservoirs and hosts of AI viruses. This study aims to detect antibody titer AI levels in blood serum and duck eggs as well as to know the different hematology profile of Tegal and Magelang ducks in Central Java. Research method was survey at farmer level. Farmer and duck samples were determined by purposive random sampling of 10 breeders for each region. Selection of respondents and ducks was based on the number of duck owners and duck age. The samples of farmers and ducks taken were determined randomly as many as 10 breeders in each area and from each breeder was selected 6 female ducks for their blood and 10 eggs to be analyzed using antibody titer against AI. The variables measured in this study were antibody titer against AI measured on blood serum and serum egg yolk, with inhibition hemagglutination test and haematological profile. The data obtained were analyzed using Ttest. The results showed protective antibodies against AI on blood serum Tegal ducks (seropositive) 58% while Magelang ducks 46%. Titer of serum antibodies of Tegal duck in the range of 22-25 while Magelang ducks 22-26. Titer of egg antibody in Tegal ducks in the range of 22-210 while Magelang ducks (which have different environment) showed no significant difference (P> 0.05). The result of T-test on leukocyte fraction profile showed that on heterophile, lymphocyte, and H / L both ducks showed a very significant difference (P < 0.01). Higher H / L values in Tegal ducks show stress due to heat stress. T-test on red blood cells, white blood cells, hemoglobin, packed cell volume (PCV), total plasma proteins, eosinophils, monocytes, fibrinogen and albumin showed no significant difference (P > 0.05). The study concluded that there was no difference of antibody titer level to AI and hematology profile in Tegal and Magelang ducks despite different maintenance environment. However, Tegal
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