

**HISTOPATHOLOGICAL APPEARANCE OF THYMUS ON BROILER
UNDER CHRONIC HEAT STRESS**

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ABSTRACT

The aim of this research was to know histopathological change of broiler's thymus which exposed by chronic heat stress. The results revealed that there were negative impact on immune organ (thymus). Broiler that exposed to chronic heat stress showed significantly increased number of heterophil and apoptosis histiocytes and cell depletion. There were 20 broilers that divided into 2 groups, each group consist of 10 broiler. Control group (P0) reared at temperature 24-28°C and humidity 40-55% and Heat Stress group (P1) reared at temperature 36-40°C on the litter housing system at Experimental Animals Laboratory, Faculty of Veterinary Medicine, Universitas Airlangga. Before the treatments, broiler had been reared from day-old-chicks to 21-day-old, then continued with heat stress condition from day 22 to 42. Thymus was collected on day 42 to examine histopathological change of thymus and analyzed using Mann-Whitney Test. The results showed significant difference ($P < 0.05$) between Control group and HS (Heat Stress) group by increased number of heterophil, apoptosis histiocytes and cell depletion.

Key word: Broiler, Chronic Heat Stress, Thymus