

Prevalence of Footpad Dermatitis and Hock Burns in Broiler Chickens in Three Different Types of Rearing Systems

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The most common lesions observed in commercial broiler farms are footpad dermatitis and hock burns, defined as necrotic lesions on the plantar surface of the footpads and in the hock of growing broiler chicken which compromises welfare. However, there are no studies done on the prevalence of footpad dermatitis and hock burns in broiler chickens in Sri Lanka. This study aimed at identifying the prevalence of footpad dermatitis and hock burns and the relationship between footpad dermatitis and hock burns in broiler chickens reared under three different housing conditions. Overall, 32-38 days old 1680 broiler chickens from three different commercial broiler housing systems were observed (Closed house: n=400, Open-sided house: n=320, Buy-back system: n=960). The plantar surface of the footpads and the hocks of the broiler chickens were macroscopically scored by using 0-3 and 0-2 scale systems respectively observing right and left foot separately. The litter quality of all three systems was also observed. Data were analyzed using Wilcoxon Signed Rank, Kruskal-Wallis and Spearman's correlation tests. According to the results, there was no difference ($P > 0.05$) between the severity of footpad dermatitis and hock burns in the left and right feet in chickens in the three rearing systems. The prevalence of footpad dermatitis and hock burns were high in the buy-back system and low in the closed-house system ($P < 0.05$). Correlation coefficient ($r = 0.276-0.322$) revealed a moderately positive relationship between the severity of footpad dermatitis and hock burns within the three rearing systems ($P < 0.01$). There was a difference ($P < 0.05$) among the litter quality of all three rearing systems where closed-house system had the best and buy-back system had a poor litter condition. In conclusion, the closed-house system was better compared with open-sided and buy-back broiler rearing systems in prevalence of footpad dermatitis, hock burns, and litter quality.

Keywords; Footpad dermatitis, Hock burns, Litter, Poultry, Welfare

This work was conducted at New Anthony's Farms (Pvt) Ltd, Thittapattara, Hanwella, Sri Lanka

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