

## **Prevalence of Footpad Dermatitis and Carcass Defects in Broiler Chickens Reared in Closed and Open-sided House Systems**

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Footpad dermatitis is the occurrence of necrotic areas of the planter surface of the foot in birds. It is considered painful and causes reduced welfare in birds. Carcass defects occur due to various factors in farm level to the processing of the bird. This study assessed the prevalence of footpad dermatitis and carcass defects in broiler chickens reared in closed and open-sided housing systems. In total 155 birds (72-Closed, 83-Open-sided) were used for assessing footpad dermatitis. Severity of footpad lesions were assessed macroscopically using 0-3 scoring system. Both feet were scored and the mean score was used for the statistical analysis. Overall, 44 carcasses (16-Closed, 28-Open-sided) were assessed for carcass defects. Defects (blood spots, hemorrhages, broken bones, bone dislocations) were assessed in wings, breast, drumsticks and back of each carcass. Analysis of the scores was done using Mann Whitney U test using Minitab 19 software. Results showed that there was no significant difference ( $P>0.05$ ) in prevalence of footpad dermatitis between the closed and open-sided housed birds. However, the prevalence of footpad dermatitis in chicken was considerably high (Closed -63.9%, Open-sided -83.2%). In overall, 18% of the birds reared in closed house had severe lesions (score 3) whereas it was 3.6% in the open-sided housed birds. There was a trend of higher number of open-sided house birds having blood spots in the wings ( $P=0.05$ ). No significant differences ( $P>0.05$ ) were observed for the other carcass defects in between the housing systems. More than 50% of birds had hemorrhages on the wings in closed (81.2%) and open-sided (71.4%) house systems. Closed housed birds had bone dislocations in the wings (12.5%). In conclusion, results revealed that high prevalence of footpad dermatitis and carcass defects in broiler chickens reared in closed or open-sided housing systems.

**Keywords:** *Broiler Chicken, Carcass Defects, Footpad Dermatitis, Poultry Housing System*