EVALUATION OF PERFORMANCES OF BROILERS RAISED UNDER DIFFERENT FLOOR SPACE GEOMETRIES IN SOUTH WESTERN NIGERIA

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ABSTRACT
The study focused on the performances of broilers raised under different floor space areas and flock sizes in deep litter housing. Pens’ floor areas ($F_1S = 2400 \text{ cm}^2$, $F_2S = 2600 \text{ cm}^2$, $F_3S = 2800 \text{ cm}^2$ and $F_4S = 3000 \text{ cm}^2$) were used with each housing 4 birds and also 4 levels of flock sizes at constant floor space area variations ($S_1D = 2800 \text{ cm}^2$, $S_2D = 4200 \text{ cm}^2$, $S_3D = 5600 \text{ cm}^2$ and $S_4D = 7000 \text{ cm}^2$) housing n = 4, 6, 8 and 10 birds, respectively. Among the parameters measured were weight gains by birds, litter weights- its dry matter content and pH values and feed conversion ratio (FCR). Proximate analysis of broiler meat was done for meat quality evaluation. Floor space (FS) had significant effect ($P \leq 0.05$) on the birds’ weights gain and weights’ uniformities and growth; FS also had significant effect ($P \leq 0.05$) on the litter weights, dry matter content and pH values of the litter. Also, statistical differences were observed for all the proximate values in $F_3S$ and $S_1D$ and in $F_1S$ cells. The 2800 cm² of 4 birds at 700 cm²/bird floor geometry gave highest weight gain (199.3 g ± 4.28), carcass dressed weight (1450.0 g ± 5.66) and FCR (7.88 ± 0.13) at both floor space area/floor geometry (FS) and flock size/stocking density (SD) variations. The 2800 cm² of 4 birds at 700 cm²/bird floor space was considered best in the research.

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