Impact of light source and feed form on growth performance and carcass traits of broiler chicks.


Abstract:

The present study aimed to evaluate the impact of light source (Incandescent versus saving lamps) and the feed form (pelleted versus mash diets) on the growth performance and carcass traits of Ross broiler chicks during 42 days experimental period. Two hundred and forty one day-old chicks were equally assigned to four experimental groups, each comprised six equal replicates. Birds in groups 1 and 2 were exposed to yellow-reddish light produced from 60-watt incandescent lamps and fed on either mash or pelleted diets, respectively, while those in Groups 3 and 4 were subjected to white light by using 26 watt saving lamps and fed on either mash or pelleted diets, respectively. The light intensity for all experimental birds was 15 Lux during the first three days and 5 Lux thereafter. Chicks were housed and raised in two tiers-wire floor batteries, placed in a closed broiler house under controlled managerial and hygienic conditions. The studied traits included: body weight (BW), body weight gain (BWG), feed intake (FI), feed conversion ratio (FCR) and the carcass traits. The obtained results revealed that the highest Overall means of BW (2811.7g), DBWG (65.89g) and DFI (116.98 g) during the experiment were recorded in G4 (saving light + feed pelleted form), increasing significantly (P>0.5) than those of the other experimental groups. Both of light source and feed form had no significant effects on the mortality rate. In the same group, the use of saving lamps and feed pelleted diets increased significantly (P>0.5) the liver percentage as related to the carcass weight. Economically, the use of saving lamps as lighting source decreased the costs of the lighting program by about 56.7% than that of incandescent lamps. Therefore, it could be concluded that using both of saving lamps and pelleted diets is highly recommended in the broiler production to achieve the best possible profit, especially with the progressive increase in the prices of feed ingredients and power cost.

Keywords:
light source, feed form, broiler, pelleted and mash diets.

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