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Effect of Improved Feeding and Housing on Productivity of Local Chickens in Babati District, Tanzania

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Abstract

Indigenous chickens have more diverse use and benefits to small holder households in Tanzania. A study to evaluate the effect of improved feeding and housing on growth, egg production and mortality for local chickens was carried out in Babati, Tanzania. A total of 1,551 chicks aged six weeks were randomly allocated to four different treatments. The treatments were (I) improved housing plus supplementation with a balanced home-formulated ration, (II) improved housing plus a normal farmer ration, (III) scavenging plus supplementation with a balanced home-formulated ration and (IV) scavenging only with no supplementation. Data on growth and mortality rate were collected up to 20th week of age at an interval of two weeks. The egg production and the laying intensity was recorded for four consecutive months and the gross margin analysis was calculated for the laying period (not reported). Overall birds in improved housing and on balanced diets significantly ($p < 0.05$) gained body weight 24 % relative to scavenging and un supplemented birds (control). Scavenging birds but on balanced diets also significantly ($p < 0.05$) gained body weight 23 % relative to the control. However scavenging birds on balanced diets experienced a very high mortality rate of 72 % negating gains achieved through supplementation. Housed birds and supplemented with normal farmer ration lost body weight by 39 % relative to control and experienced a mortality rate of 47 %. Egg production intensity for treatments I, II, III and IV were 57 %, 47 %, 20 % and 30 %, respectively. From these results it was therefore concluded that home-formulated balanced ratios have a positive influence on the performance of local chickens in terms of growth rate and egg production. Housing of local chicken can be beneficial if chickens are supplemented by a balanced ration. Improved housing significantly reduced mortality rates of local chickens.

Keywords: Confinement, home-formulated ration, local chickens, local poultry, scavenging