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The effects of dietary rice bran level on the quality and quantity of broiler litter

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A completely randomised design experiment was conducted to determine as to how the quality and quantity of broiler litter are affected by different diets. Day old broiler chicks (n=300) were randomly allocated in to 12 pens. Birds were raised on paddy husk based litter from day 1 to 42 and fed one of the following diets: 1) starter and finisher diet with 25% rice bran (RB), 2). starter and finisher diet with 35% RB, 3). starter and finisher diet with 45% RB and 4).a commercial diets (starter and finisher). Starter diets were given from day 1-21 and the finisher diets thereafter. Three litter samples were taken from each pen at weekly intervals. Litter moisture %, ash %, N %, and bulk density were measured weekly and the total litter production was measured on day 42. Litter N % was not significantly affected by the dietary types but varied from 1.6 – 2.5 %. Birds fed commercial diets produced litters with lowest N percentage possibly, due to higher protein digestibility. The litter moisture and ash contents were also not affected by dietary treatments. Over the six week period, both litter moisture and ash content increased in all groups. The litter bulk density was also increased over the time. On day 42, the bulk density of the litter of the birds fed commercial diets was significantly lower than those on other treatments. Lower dry matter content in faeces arising from better digestibility of the commercial diet may be the reason for lower bulk density. The litter production (on fresh weight) per unit of live weight ranged from 0.89-1.1 kg. Litter production both on dry and fresh weight basis, per unit of live weight was significantly higher in birds fed 25% RB based diets. It is concluded that every Kg of broiler live weight production gives rise to one kg of paddy husk based litter and on farm-mixed mash form broiler diet results in higher litter N levels than commercial diets.

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