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Effect of dietary rice bran and energy levels on the digesta transit time of broiler chicken

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Gastric transit time (GTT) of digesta through the digestive tract affects the efficiency of feed digestion and absorption. Meanwhile, a range of animal, dietary and environmental factors governs the gastric transit time of digesta. Two completely randomized design experiments, each having seven replicates were conducted to determine the GTT of digesta of broiler chicken as affected by two dietary rice bran (RB) levels (20 and 40%) and two dietary energy levels (3000 and 3400 kcal/kg). All diets were in mash form. Following a five hours of feed deprivation, broilers were offered experimental diets. Birds were observed for the expulsion of the first faecal pellet. The time between feed offer and the appearance of the first faecal pellet was considered as the GTT. Data were analyzed using GLM procedure of SAS. The digesta transit time (mean±SE) of broilers fed 20 and 40% RB were 199±5.30 and 196±4.54 minutes, respectively and was not significantly affected by the dietary RB level. Dietary energy level also did not have significant effect on the mean gastric transit time. The digesta transit time (mean±SE) of the broilers fed 3000 and 3400 kcal/kg were 216±3.78 and 214±6.43 minutes, respectively. Digesta retention time per 100 g of live body weight was also not altered due either to the dietary energy or rice bran levels. Irrespective of the dietary energy level and RB level the retention time raged within a narrow range from 12 to 14 minutes per 100g of live body weight. There was no significant correlation between the live weight and the mean digesta transit time. It was concluded that dietary rice bran (20 or 40%) and energy levels (3000 or 3400Kcal/kg) had no effect on GTT of broilers.

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