EFFECTS OF RUBBER (HEVEA BRASILIENSIS L.) SEED MEAL ON THE COMPOSITION OF QUAIL (COTURNIX COTURNIX JAPONICA) EGGS

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ABSTRACT
Quail (Coturnix coturnix japonica) meat and eggs have gained popularity among consumers in recent times. The type of feed fed to poultry could affect the egg composition, but information is lacking on the composition of quail eggs. Therefore, this research was conducted to determine the effects of using rubber (Hevea brasiliensis L.) seed meal as an alternative to soya bean (Glycine max L.) and groundnut (Arachis hypogaea L.) cakes in quail diets. Using a completely randomised experimental design, a total of 150 one-week-old Japanese quail chicks were divided into five treatment groups. The treatments were: 1, Control group, with no rubber seed meal (0% RSM); 2, 50% toasted, rubber seed meal (TRSM); 3, 100% TRSM; 4, 50% boiled, sun-dried, rubber seed meal (BRSM); and 5, 100% BRSM. The egg dry matter content varied significantly (P < 0.05) among the diets (Control, 29.19%; 50% TRSM, 30.63%; 100% TRSM, 26.63%; 50% BRSM, 24.68%; and 100% BRSM, 25.93%). There were also significant (P < 0.05) differences in the protein content among the diets: (Control, 13.46%; 50% TRSM, 13.83%; 100% TRSM, 12.36%; 50% BRSM, 11.30%; and 100% BRSM, 11.81%). There were no significant differences in the cholesterol level among the control (349.43 mg/100g), 50%TRSM (341.52 mg/100g), and 100% TRSM (341.17 mg/100g). These three were significantly (P< 0.05) lower in cholesterol level than 0% BRSM (424.36 mg/100g) and 100% BRSM (424.16 mg/100g), the last two being non-significantly different from each other in cholesterol level. Sodium level followed a similar trend. Protein concentration varied among the diets (Control, 13.46%; 50% TRSM, 13.83%; 100 TRSM, 12.36%; 50% BRSM, 11.30%; and 100% BRSM 11.81%). Boiling and sun-drying were not effective in reducing the anti-nutrient factor in rubber seeds, as evident in elevated values in cholesterol and triglycerides in boiled seeds. It was concluded that substituting up to 50% soya bean with toasted rubber seed meal in quail diet had no adverse effects on the nutritive values of eggs. It is recommended that quail farmers can use up to 50% toasted, rubber seed meal to replace soya bean in quail diets.

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