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Effects of Storage Duration on Quality and Yolk Lipid Profile of Japanese Quail (*Coturnix Coturnix Japonica*) Eggs

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A 28 days study was carried out to determine the effect of storage durations on quality and yolk lipid profile of Japanese quail eggs. Two hundred and fiftyeggs collected from 315 laying hens within a day of lay were used for the study.The eggs were randomly divided into five treatment groups comprising different durations of storage (0, 7, 14, 21 and 28 days) in a completely randomized design and were stored at room temperature. Each group was replicated 5 times with 10 eggs per replicate. The external and internal egg quality characteristics were measured throughout the durations of storage. Proximate compositions (Moisture, crude protein, fat, ash, and carbohydrate) and lipid profile (total cholesterol, high density lipoproteins and low density lipoproteins) of the eggs were also determined for each treatment group. Data were subjected to analysis of variance (ANOVA). Results showed that egg quality parameters of egg weight, egg length, egg diameter, shell surface area, albumen-yolk weight, yolk height, yolk diameter, albumen height and yolk index were significantly ($P<0.05$) affected by the durations of storage. Egg weight, yolk height, yolk index, and albumen height progressively declined($P<0.05$) as the durations of storage increased. Also, moisture, crude protein, fat, carbohydrate, and high density lipoprotein levels progressively decreased ($P<0.05$) as the eggs were stored for longer durations. The total cholesterol however increased ($P<0.05$) with increasing storage durations. It was concluded from the study that quail eggs maintained good quality when stored at room temperature up till 14 days.

Biography

Uzochukwu, Ifeanyi is an Assistant Lecturer in the Department of Animal Science at the University of Nigeria, Nsukka where he has been a faculty member since 2014. Ifeanyi is currently a Ph.D Student in the area of Animal Reproductive Physiology at the University of Nigeria, Nsukka from where he obtained an M.Sc and B.Agric degrees in 2016 and 2011 respectively. His research interest lie in the area studying the effect of stressors on the reproductive physiology and process of domestic birds. He has several publications and has attended many conferences both locally and internationally.