

The Relationships Between Laying Age and Repeatability of Egg Quality Traits in Japanese Quails (*Coturnix coturnix japonica*)

G.N. Akpa¹, J. Kaye¹, I.A. Adeyinka² and M. Kabir^{1*}

¹Animal Science Department, Ahmadu Bello University, Zaria, Nigeria ²National Animal Production Research Institute (NAPRI), Shika - Zaria, Nigeria

Abstract :

Repeatability at 12, 16, 20, 24 and 28-weeks of age of egg weight, egg length, yolk weight, albumen weight, shell thickness, shell membrane thickness, albumen index, yolk index, egg index and shape index was estimated based on the first three eggs laid in the week by forty-eight Japanese quail (*Coturnix coturnix japonica*) pullets. The estimated repeatability for these traits was high (0.58 - 0.99) with a consistent increase in repeatability as laying age progressed. Repeatability of egg length, egg index and shape index showed a linear relationship with age, where as the remaining traits showed a curvilinear relationship. The general increase in repeatability of each trait with age indicates that fewer records would be required to adequately characterize the inherent producing ability of each quail hen for the trait as laying age progressed. Maximum repeatability estimates were observed at 28 weeks of age.

Key Word :

Laying age, repeatability, associations, egg characteristics and quails

Volume 7, Number 6, - 2008, ISSN 1682-8356