

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

QUALITY OF EGGS LAID BY QUAILS FED ON INCREASING LEVELS OF CINNAMON POWDER

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The demand for quail meat and eggs is on the rise. Nowadays, the *per capita* intake is 35 eggs/inhabitant/year, which has led to an encouragement for the breeders to increase and improve their livestock. In order to meet the market requirements, the focus of the researches has been to seek natural feed additives, such as cinnamon, which has cinnamaldehyde as active principle. Cinnamaldehyde has antiseptic, antimicrobial, antioxidant and digestion stimulator properties, which are characteristics that can improve the quality of the eggs. Besides, cinnamon has natural pigment agents able to provide the egg yolk with reddish color without producing waste. The present study was conducted to investigate the effect of dietary supplementation with cinnamon powder in the diet on the quality of quail eggs. A total 360 Japanese quails were utilized, 18 weeks-old, and then distributed in a completely randomized design, with five treatments and six repetitions of 12 birds per experimental unit. The experiment was divided in three cycles of 28 days. Feed and water were provided ad libitum throughout the experimental period. The treatments consisted in the inclusion of increasing levels (0, 0.3, 0.6, 0.9 and 1.2) of cinnamon powder in of quail diets replacing the inert material. All of the experimental diets were isocaloric and isonitrogenous. On the last three days of each cycle, six eggs with the mean weight of the experimental unit were selected for quality analysis, where the following parameters were evaluated: egg weight (g), specific gravity (g/ml), albumen height (mm), yolk color, yolk weight (g), shell weight (g), shell thickness (mm) and albumen weight (g). Using these data, the Haugh Unit (HU) was also calculated, along with yolk, shell and albumen percentages. The results obtained were submitted to a regression analysis, at 5% level of probability. A crescent linearly effect was observed for egg specific gravity ($P=0.00$; $Y= 1.078233+ 0.003167X$; $R^2 = 94.23$) and yolk color ($P=0.04$; $Y=4.936000+ 0.206667X$; $R^2 = 76.48$). For the other variables: shell thickness (0.20mm), albumen height (0.76 mm), Haugh Unit (92.76), yolk weight (3.33 g) and percentage (31.65%), shell weight (0.92 g) and percentage (8.79%), and albumen weight (6.34 g) and percentage (60.15%) there was no significant effect. Thus, we conclude that the inclusion of 1.2% of cinnamon powder in the diet of Japanese quails during the laying phase improvement specific gravity and yolk color of eggs.

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