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Age-Related Carcass Component Changes in Cockerel Chickens Fed Diets Containing Oyster Mushroom (*Pleurotus ostreatus*)

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Abstract

The slaughter value of poultry is dependent on its carcass tissue composition, dressing percentage, meat quality and the distribution of particular tissues in the carcass hinged on the use of phytobiotics including oyster mushroom as an alternative to antibiotics in order to combat residues in poultry products. Hence, this study determined the age-related carcass component changes in 120, a day-old cockerel chickens fed diet containing oyster mushroom (*Pleurotus ostreatus*). The birds were randomly allotted into four treatments of varying levels (0, 500, 750 and 1000 ppm) of oyster mushroom administered in feed with each treatment consisting of 30 birds, which were further divided into three replicates of 10 birds each in a Completely Randomized Design. At 4^{th}, $6th$ and 8^{th} weeks of the experiment, two birds were selected from each replicate and slaughtered for carcass analysis. Results showed that age had significant ($p < 0.05$) effects on the live, plucked and eviscerated weights, dressing percentage, head, drumstick and lungs. The highest live, plucked and eviscerated weights, drumsticks and lungs were recorded in cockerels slaughtered in week 8 (756.3 g, 681.9 g, 577.8 g, 10.4 % and 0.69 %, respectively) but lowest at week 4. However, the percentage head was significantly higher (5.32 %) in week 4 than 4.20 % recorded in week 8 indicating inverse relationship between head and age. Also, the inclusion levels of oyster mushroom in feed significantly ($p < 0.05$) affected liver, spleen and heart. Comparable similar means (650.0 and 639.7 g) for live weights were observed at 750 and 1000 ppm, respectively which were significantly higher than 529.0 g recorded at 500 ppm. Also, liver and heart were significantly highest (2.34 and 0.54 %, respectively) at 500 ppm and lowest (1.78 and 0.37 %, respectively) at 750 ppm. Similarly, interaction between age and the inclusion level of oyster mushroom significantly ($p < 0.05$) affected live, plucked and eviscerated weights, head, wings, lung, spleen and liver proportions. It was concluded that with increase in ages and inclusion of Oyster mushroom (*Pleurotus ostreatus*) in feed at 750 and 1000 ppm, weights of cockerels increased.

Keywords: Age-related, cockerel chickens, growth performance, oyster mushroom

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