

Physiologic Values of Broiler Femurs at Different Growth Phases Using Bone Densitometry and Bone Breaking Strength

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Abstract :

The objective of this experiment was to determine the normal values of Bone Radiographic Density (BRD) by using the optical densitometry in radiographic images and the Bone Breaking Strength (BBS) of broiler femurs at different ages (8, 22 and 42 d of age). A total of 60 Cobb male broilers were distributed in three age groups of 20 birds. The BRD and the BBS (maxim force and rigidity) values increased ($p < 0.01$) over the course of ages, presenting greater values at 42 d of age when comparing to 8 and 22 d of age, evidencing a biomechanical adaptation of femur to growth. This experiment offers results that can be used in other experiments of broilers fed with different nutritional levels and they can also be related to pathological values, allowing the diagnosis of diseases that affect the integrity of the poultry leg.

Key Word :

Bone breaking strength, bone radiographic density, broiler, femur, growth, physiology

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