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Assessment of Breeding Soundness by Comparative Radiography and Ultrasonography of Rabbit Testes

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Abstract : In order to improve the animal protein recommended daily intake of Nigerians, there is an upsurge in breeding of hitherto shunned food animals one of which is the rabbit. Radiography and ultrasonography are tools for diagnosing disease and evaluating the anatomical architecture of parts of the body non-invasively. As the rabbit is becoming a more important food animal, to achieve improved breeding of these animals, the best of the species form a breeding stock and will usually depend on breeding soundness which may be evaluated by assessment of the male reproductive organs by these tools. Four male intact rabbits weighing between 1.2 to 1.5 kg were acquired and acclimatized for 2 weeks. Dorsoventral views of the testes were acquired using a digital radiographic machine and a 5 MHz portable ultrasound scanner was used to acquire images of the testes in longitudinal, sagittal and transverse planes. Radiographic images acquired revealed soft tissue images of the testes in all rabbits. The testes lie in individual scrotal sacs sides on both sides of the midline at the level of the caudal vertebrae and thus are superimposed by caudal vertebrae and the caudal limits of the pelvic girdle. The ultrasonographic images revealed mostly homogenously hypoechogenic testes and a hyperechogenic mediastinum testis. The dorsal and ventral poles of the testes were heterogeneously hypoechogenic and correspond to the epididymis and spermatic cord. The rabbit is unique in the ability to retract the testes particularly when stressed and so careful and stressless handling during the procedures is of paramount importance. The imaging of rabbit testes can be safely done using both imaging methods but ultrasonography is a better method of assessment and evaluation of soundness for breeding.

Keywords : breeding soundness, rabbit, radiography, ultrasonography
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