



## **I-INTERNATIONAL MEETING OF ANIMAL SCIENCE IN SEMI-ARID REGIONS**

Universidade Federal do Agreste de Pernambuco – UFAPE

July 03<sup>rd</sup> to 05<sup>th</sup>, 2024, Garanhuns-PE

Area of work: Ruminant nutrition and production

### **External carcass measurements of sheep in a crop-livestock system in the Caatinga biome**

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Implementing a crop-livestock system in the Caatinga biome for sheep is a production system that seeks to make the potential of pastures viable. Therefore, the study of carcass morphometry in sheep is essential to improve production efficiency and carcass quality. Thus, the objective of this work was to assess the external carcass measurements of sheep in a crop-livestock system in the Caatinga biome. The experimental period was carried out over two subsequent years (2022 and 2023). The experiment was conducted at the Federal Rural University of Pernambuco, Serra Talhada Academic Unit, in a thinned Caatinga site composed of Mororó tree (*Bauhinia cheilantha* Steud Bong) and enriched with Buffel grass (*Cenchrus ciliaris* L.) and Urochloa grass (*Urochloa mosambicensis* Salm-Dyck). The treatments were three crop-livestock systems implanted in the Caatinga, comprised of the sheep livestock integrated with (i) bean crop, (ii) maize crop, and (iii) herb-cotton crop. The control treatment was composed of sole Caatinga rangeland. Twenty non-castrated male lambs (Santa Inês × Dorper crossbreed) aged six months old were used in the study, and they had an initial average weight of  $24.64 \pm 2.95$  kg. The experimental design utilized was a completely randomized design with four crop-livestock systems and five animals per treatment were utilized. All variables were subjected to the analysis of variance followed by the Tukey test, using the GLM procedure of Statistical Analysis Systems. At the end of the experiment, the sheep were slaughtered (after a solid-food deprivation period of 16 h). Pre-slaughter procedures complied with good animal welfare practices and the slaughter was carried out conforming the Regulation of Industrial and Sanitary Inspection of Animal Products. The external carcass length was measured between the base of the neck and the base of the tail. Internal carcass length was obtained as the maximum distance between the anterior border of the ischio-pubic symphysis and the anterior border of the first rib at its midpoint. Leg length was measured between the perineum at its most distal edge and the inner edge of the tarsometatarsal articular surface from the inner side of the leg. Thorax depth was measured as the maximum distance between the sternum and the back of the carcass at the sixth vertebra. The integrated crop-livestock system did not significantly affect the external carcass measurements of sheep ( $P > 0.05$ ). The external length, internal length, leg length, and thorax depth showed average values of 57.48, 51.51, 42.06, and 27.34 cm, respectively. This effect is because of the similarity between rangelands and animals. The crop-livestock system in the Caatinga is recommended because it does not alter the external carcass measurements of sheep.

**Keywords: external length; lambs; semi-arid; small ruminants**

Animal Experimentation Ethics Committee: approval no. 2436310322/UFRPE.

Financial support: FACEPE.