

CORRELATION OF ZOOMETRIC INDICES AND MORPHOMETRIC MEASUREMENTS IN DORPER LAMBS

CORRELAÇÃO DE ÍNDICES ZOOMÉTRICOS E MEDIDAS MORFOMÉTRICAS EM CORDEIROS DORPER

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Abstract

Many studies have been conducted to identify animals with good ability for meat production. In this respect, morphometric measurements and zoometric indices are important tools to select many characteristics aiming at animal genetic improvement, increasing the profitability and sustainability of animal production. This study was carried out at the Sheep Unit of the Instituto de Zootecnia in Nova Odessa, São Paulo, Brazil, with the objective of correlating zoometric indices and morphometric measurements in Dorper lambs. We used 26 registered uncastrated male lambs, with mean age of 102.30 ± 16.30 days and mean weight of 26.10 ± 4.14 kg. The weight was measured with mechanical scale and morphometric measurements were performed with a tape measure and a hypometer. The morphometric measurements collected were withers height (HW), rump height (HR), body length (BL), thoracic perimeter (TP) and rump width (RW). The zoometric indices were calculated by the morphometric measurements body index (BI), relative body index (RBI), thoracic perimeter-withers height ratio (TPRI), and body capacity index (BCI). Pearson's correlation coefficients were obtained using the average of morphometric measurements and zoometric indices, through the SAS software (Statistics Analyses System). The averages for HW, HR, BL, TP and RW were 52.65 ± 2.68 cm, 52.19 ± 2.75 cm, 59.83 ± 2.83 cm, 70.13 ± 4.71 cm, 25.43 ± 2.15 cm respectively. The values of the indices were 85.49 ± 4.12 %, 113.81 ± 6.14 %, 133.36 ± 8.90 % and 46.35 ± 5.45 kg/cm for BI, RBI, TPRI and BCI respectively. There was medium-high correlation ($p < 0.05$) of withers height and BI ($r = -0.59$), TPRI ($r = 0.61$), and BCI ($r = -0.44$), respectively. Rump height also showed correlation ($p < 0.05$) with BI ($r = -0.45$), RBI ($r = 0.49$) and BCI ($r = -0.42$). At the same rate, body length showed positive medium-high correlations ($p < 0.05$) with BI ($r = 0.52$) and RBI ($r = 0.49$). There was a high correlation coefficient also ($p < 0.0001$) for thoracic perimeter and TPRI ($r = 0.85$), and BCI ($r = 0.40$). The results obtained confirmed that zoometric indices and morphometric measurements are correlated and important to apply for characterization of the sheep herds, providing important data for selection and animal genetic improvement, an important factor for production intensification.

Keywords

Zoometric indices, morphometric indices, lambs, selection of animals, sheep.

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