



### **Influence of age on goat leather quality**

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The quality of the leather from mammals is influenced by breed, conservation method, tanning process, humidity and temperature. Aiming to evaluate the influence of age and position of sample collection on the quality of leathers from Anglo Nubian, Alpine and Saanen goats, an experimental group of 30 non-castrated males (ten of each breed; five at three months old, and five at six months old) was used. The animals received a diet consisting of chopped hay of *Cynodon dactylon*, cultivar Coast-Cross, and mineral salt, supplied *ad libitum*, plus concentrate, in an amount proportional to their weight, over the course of the experiment. The animals, identified by a number recorded on an aluminum plate held onto their neck by a chain, were inserted into the experimental unit after weaning, which occurred after 45 days of age, with the minimum live weight of 12 kg. Goats were reared on a shed covered by calhetão-type (fiber cement) tiles, protected with aluminum tiles on three sides. A wooden structure was built inside the shed 80 cm above the soil. Floor and side walls were made of slatted wood. All shed was surrounded by screens to prevent the access of domestic and wild animals. The water was supplied in swing drinkers by a reservoir installed on the external wall of the shed, protected from the incoming solar radiation. The animals were stunned, slaughtered and subsequently skinned following pre-established cut lines. Skins were preserved by brine-curing and salting and identified by the number of the animal, used in rearing, tattooed on their neck. Skins were tanned with chromium sulfate and retanned with an acrylic retanning agent. To evaluate the inherent quality of tensile strength, tear strength and distension (lastometer) three samples of the leathers were collected in the parallel position, and another three in the position perpendicular to the dorsal midline. The means of the results were compared by Tukey's test at 5% probability. Age did not affect the resistance to distension of the surface of the leathers studied in the lastometer test, indicating soft leather with high elasticity. All results were above seven millimeters, the minimum value specified by the technical standard for leathers of good inherent quality. The tear strength of the leathers was not affected by age or position ( $P>0.05$ ). The leathers from animals at six months of age, in the two positions, showed greater tensile strength ( $P<0.05$ ) than the leathers from three-month-old goats due to the greater tensile load supported. The tensile strength of the leathers, at the two ages, in the longitudinal position, were greater than in the transverse position ( $P<0.05$ ), which was an expected behavior, since the tensile strength is higher in the direction parallel to the prevailing direction of the collagen fiber bundles in the skin, which is parallel to the dorsal midline. The age and position of collection of the samples affect the tensile strength, one of the qualitative attributes of leather.

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