The knowledge of the quantitative and qualitative characteristics of the sheep carcass is fundamental for the industry and market. The determination of such aspects can be obtained by biometric measures, obtained in vivo and morphometric in the carcass. The objective of this study was to evaluate the effects of sex and age at weaning on biometric measures, obtained in vivo and morphometric in the carcass of Dorper crossbred lambs. It was used 32 Dorper crossbred lambs, being 8 females and 8 males weaned at 70 days of age and 8 females and 8 males weaned at 100 days of age, with average of live weight at slaughter of 21.60 kg. From the 10 day of age the lambs were fed a diet containing 23.3% crude protein and 2.95 Mcal of MS / kg DM up to 70 days of age. During this period the lambs remained confined in the sheepfold and followed by suckling in the afternoon and evening. From 70 days to 100 days half the lambs stayed together with the ewes in the field and also received silage and 200 g / day of concentrate. The slaughter occurred when the lambs reached 70 and 100 days of age. The biometric measures were: rump height, thorax width, chest width, croup width, thorax perimeter, thigh perimeter, rump Perimeter, leg length, femur length. The morphometric measurements of the carcass were: width of the rump, depth of the chest, length of the carcass, perimeter of the rump, perimeter of the thorax, perimeter of the leg, Length of the leg, depth of the chest. The design was completely randomized in a 2x2 factorial scheme (two sex and two age). The mean was compared by the Tukey test at 5% probability. From biometric measurements, only the height of the withers, height of the rump were significantly at 100 days, but the chest circumference was superior for the lambs at 70 days. Morphometric measurements showed significant superiority for carcass length and leg length at 100 days. These results are due to the tissues growth, mainly bone, being still in development at the slaughter age. Lambs at 100 days presented superior value in most measurements, in both, live and in the carcass.

**Keywords:** Cuts, weight, yield

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