

EFFECT OF LAMBING ON SUBCUTANEOUS TEMPERATURE IN EWES

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The temperature of animals changes during the day according to a circadian pattern and is altered by diseases or stressful moments that the animal goes through. The study took place in September with an average temperature of 18.5°C (25.6-11.3°C). Three Assaf ewes with a live weight of 65.52±5.25 kg, which were diagnosed as pregnant by ultrasound, were implanted with a bio-logger device (DST milli-HRT ACT, Star Oddi, Gardabaer, Iceland) that recorded subcutaneous temperature every five minutes during the pre-lambing, lambing and post-lambing period for 28 days, the procedure was approved by the bioethics committee of the University of Salamanca with the n° 904.. After downloading the data (n = 5,801 records) were downloaded, the days were divided into three groups: PRE-LAMBING (n = 1,829 records): 11 days before lambing, LAMBING (n = 271 records): the day of lambing, and POST-LAMBING (n = 4,060 records): 15 days after lambing. Differences between day groups were analyzed by multivariate analysis of variance and post-hoc Tukey's test, with day group and time as fixed factors. Significant statistical differences (p<0.001) were found between the recorded temperatures of the three groups studied. The mean temperature increased to 39.03±0.33°C on the post-lambing days vs 38.55±0.45°C on the pre-lambing days. During all the days studied, the highest temperature recorded was concentrated at 16:00 h. (39.40°C) and the lowest at 8:00 h. (38.25°C). At 16:00 h. the group with the highest recorded temperature was the POST-LAMBING group (39.22±0.18°C) and the group with the lowest recorded temperature was the PRE-LAMBING group (38.69±0.49°C). Similar differences were found at 8:00 h, where the POST-LAMBING group had the highest recorded temperature (38.87±0.34°C) vs the PRE-LAMBING group had the lowest (38.16±0.46°C). The circadianity of the recorded temperatures changed at the three times studied. Lambing shifted the time of the highest acrophase from 19.53 h. in pre-lambing to 15.07 h. on the day of lambing. In conclusion, lambing produces a change in temperature records, which increase to febrile limits in the days following lambing. The circadianity of temperature is radically altered on the day of lambing, which gives us an idea of the physiological changes that the ewe must undergo at the time of lambing. It is possible to detect the onset of labour period with increasing temperature and on the other hand to reduce postpartum fever, as practical implications of labour.