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### **Different embryo collection methods and superovulation protocols in crioula lanada ewes**

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The sheep breeds with specific environmental genetic adaptation provides economic benefits for the producer, which requires their preservation. In southern Brazil, the race Creole Lanada presents resistance to endoparasites and foot problems. The inclusion of other races reflected in intercrosses and spread the breed standard, requiring alternatives to facilitate the maintenance and preservation of genetic adaptations race. This paper proposes to determine the efficiency of different commercial formulations of FSH in superovulation protocol in different ways to collect embryos. Multiparous sheep females (n=8), from the in situ preservation of core Embrapa South Livestock (Bagé, RS), previously selected for cervical catheterization, were subjected to superovulation. It were formed with two groups (n = 4) in which the obtained synchronized estrus cycle, that superovulation occurs 60 hours post-estrus. One group received FSH (200mg, Foltropin V<sup>®</sup>) and the other FSH + LH (250 + 250, Pluset<sup>®</sup>) twice daily for four consecutive days. On the first day, it was deployed CIDR-G<sup>®</sup>, in which it was removed after 72 hours, by the oral application of hyperacute flushing glycerin and PGF2 $\alpha$  IM application. The estrus was detected by ruffians and then the females were inseminated (12 and 24), by superficial cervical route with cooled semen (150 x 10<sup>6</sup> cells / mL) two males of the race. Two females from each group were selected for collecting embryos by laparotomy (LT) or via transcervical (TC). On the fifth day after estrus, females were submitted to water and fasting. The flock of the TC collection received an IM dose of BE and oxytocin, 12h and 15min before the procedure, respectively. In D6, the sheep of the LT group were anesthetized (ketamine + xylazine) and submitted to the collection and counting of corpora lutea (CLs). In the TC group, this count was later done by laparoscopy. Females group had FSH response averaged 5.5 LCs, in which the TC group of each animal recovery rate was 50% and 100%, and the rates LT group were 67% and 100%. In females FSH + LH group, the average was 11.2 LC, with recovery rate in the CT group 100% and 0%, and the LT group of 73% and 66%. Most of the collected structures were not fertilized. The collection by LT provided more consistent results, however, via TC provided an acceptable rate of embryo recovery. Because of the negative effects of LT, this result should be considered in races with limited number of copies. The number of LCs obtained with treatment FSH + LH was higher than that obtained with FSH, proposing new reproductive investigations of female sheep of the Creole race.