with pasture, forages and commercial concentrate. The concentrate ration for the MG ewes was offered in a common trough and quantity based on the average body weight but SG ewes received the concentrate ration individually and based on their own body weights. Body weight and metabolites were assessed weekly throughout peripartum (4 weeks before and 4 weeks after partum); the energy balance was measured with the concentration of non-esterified fatty acids, glucose, total proteins and albumin. Lambs body weight was measured at birth and one week later, and their behavior observed during the first hour after birth. Data were analyzed using repeated measures test (body weight and metabolite concentration) or ANOVA (lamb behavior and lamb body weight) and one way Pearson’s correlation. During the peripartum period, the average ewe body weight was lower in MG than in SG ewes (47.05 ± 1.31 kg and 50.98 ± 1.41 kg, respectively) (p < 0.02) and it was affected by the week of peripartum. Before partum, the ewe's body weight gain in the SG was 1.33 kg greater than in the MG, and after partum it was 3.31 kg greater (p < 0.05). The concentration of energy metabolism indicators during peripartum was similar (p > 0.05). Glucose and NEFA were negatively correlated (r= -0.47, p < 0.001). After birth, the lambs of both groups took 19 ± 1.5 min to stand up and 25 ± 1.6 min to reach the udder (p > 0.05). However, the time that took to suck milk for the first time was 10 min longer in the MG lambs than in SG lambs (p < 0.05). There was no effect of ewes’ diet on the lambs’ weight. However, a negative correlation between latency to first suckle and birth weight (r= -0.25, p < 0.05) was observed. The present study demonstrates that individual supplementation to pregnant ewes resulted in a postpartum higher body weight gain compared to control animals. However, metabolic parameters, which indicate body reserve mobilization, were similar in both groups. Lambs born from supplemented ewes sucked milk before than their counterparts when evaluated within the first hour after delivery, which suggest differences in development.

**PS115 - Effect of the availability of artificial shade during grazing on progesterone concentration in West African lambs before puberty in the tropic**

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Our aim was to evaluate the effect of artificial shade availability during grazing on blood progesterone concentration in West African sheep before puberty. Twenty female lambs between 12-13 kg live weight and four months old were assigned randomly to two treatments (T): SHADE: paddock with Cynodon nlemfuensis grass and freedom access to artificial shade or shelter made with green hill and about 1.8 m high of 36 m² and, SUN: equal and contiguous paddock without any natural or artificial shade availability. The experiment was performed in the Sheep Unit of the Agronomy School – Universidad Central de Venezuela (10°14’49” N, 67°35’45” W) during five months of the rainy season (August to November). Blood samples for progesterone determinations were collected every three days during experiment, when animals were between 118 to 192 days old. The serum progesterone concentration was measured by commercial ELISA kit (Progesterone ELISA, DRG Instruments GmbH Germany®). The progesterone absolute concentration (ABSP4) by day of the evaluation and the accumulated progesterone (ACCUP4; sum of all the values obtained at each sampling) were evaluated. Statistical analysis of data was performed using ANOVA for longitudinal measures (MIXED SAS); the model included the effect of T (SHADE vs. SUN), effect of the day (Day) of the measurement or age the animals and their interaction (T*Day). The ABSP4 was not affected for T or T*Day. However, there was effect of Day on ABSP4 (P<0.01). In relation of ACCUP4 there were effect by T, Day and T*Day. ACCUP4 mean values by T effect were 5.25±1.51 ng/mL in SHADE and 9.97±1.51 ng/mL in SUN (P<0.04). According with the results, the first ovulation or age of puberty in female tropical sheep was when animals were approximately 175 days old (±5.8 months old). Nevertheless, in lambs without availability of shade in the paddock could be presented an overstimulation at level of the cortex adrenal which explains the higher level the ACCUP4 presented by them. In conclusion, the availability of shade during daily grazing time can modify the secretion of progesterone without effect on age of puberty in female West African lambs under tropical conditions. Future researches related to the potential impact of the high levels of progesterone in not luteal origin in tropical sheep are needed.