Monitoring Vaginal Electrical Resistance, Follicular Wave and Hormonal Profile during Estrus Cycle in Indigenous Sheep

Authors : T. A. Rosy, M. R. I. Talukdar, N. S. Juyena, F. Y. Bari, M. N. Islam

Abstract : The ovarian follicular dynamics, vaginal electrical resistance (VER) and progesterone (P4) and estrogen (E2) profiles were investigated during estrus cycle in four indigenous ewes. Daily VER values were recorded with heat detector. The follicles were observed and measured by trans-rectal ultrasonography. Blood was collected daily for hormonal profiles. Results showed a significant variation in VER values ($P<0.05$) at estrus in regards to ewes and cycles. The day difference between two successive lower values in VER waves ranged from 13-17 days which might indicate the estrus cycle in indigenous ewes. Trans-rectal ultrasonography of ovaries revealed the presence of two to four waves of follicular growth during the study period. Results also showed that follicular diameter was negatively correlated with VER values. Study of hormonal profiles by ELISA revealed a positive correlation between E2 concentration and development of follicle and negative correlation between P4 concentration and development of follicle. The concentrations of estradiol increased at the time of estrus and then fall down in a basal level. Development of follicular size was accompanied by an increase in the concentration of serum estradiol. Inversely, when follicles heed to ovulation concentration of progesterone starts to fall down and after ovulation it turns its way to the zenith and remains at this state until next ovulatory follicle comes to its maximum diameter. This study could help scientists to set up a manipulative reproductive technique for improving genetic values of sheep in Bangladesh.

Keywords : ovarian follicle, hormonal profile, sheep, ultrasonography, vaginal electrical resistance
Conference Title : ICSGL 2017 : International Conference on Sheep and Goat Livestock
Conference Location : Paris, France
Conference Dates : January 23-24, 2017