

Title *Morphometric Evaluation of Corpus Luteum and ovary During Estrous in Nili-Ravi Buffalo Through Ultrasonography in spring and Dry Hot Seasons*

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Abstract:

Introduction: The current investigation was carried out to study the effect of season on the morphometric values of corpus luteum and ovary in spring (February-April) and dry hot (May-June) seasons in the same animals and to characterize the biometry of corpus luteum and ovary during estrous through ultrasonography in Nili-Ravi buffalo. The correlation between the plasma Progesterone concentrations and ultrasonographic biometry of corpus luteum was also studied during estrous in spring and dry hot seasons.

Materials and Methods: The study was conducted on ten female Nili-Ravi buffaloes in both the seasons (spring versus dry hot). The ultrasonographic measurements and echogenicity of ovaries and corpus luteum were performed by using linear rectal probe (Agro-scan AL) of 5.0 MHZ on alternate days during the entire length of estrous cycle. The plasma progesterone level was determined by taking 10 ml blood samples by coccygeal vein puncture on the examination day from each animal in test tubes, containing EDTA. The collected blood was centrifuged at 4000 rpm for about 20 minutes and then the plasma was harvested, labeled and stored at freezing temperature (-20 °C) until progesterone (P4) evaluation through ELISA technique.

Statistical Analysis: The data obtained by the ultrasonographic examinations was analyzed with the help of paired t-test and the correlations regarding plasma progesterone (P4) concentration and the morphometric values of corpus luteum were determined by Pearson correlation by using computer software SPSS statistics version 17.
