Title of thesis : Studies on the management of anoestrus using norgestomet implants and clomiphene citrate in cows  
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Abstract

The present study was designed to record the incidence of anoestrus, estimate blood mineral profile and evaluate the therapeutic efficacy of Clomiphene citrate and Norgestomet ear implants for treatment of true anoestrus in cows belonging to sub-temperate zone of Himachal Pradesh. The incidence of anoestrus was recorded from amongst the cases presented for various reproductive disorders in Veterinary Clinics, COVAS, CSKHPKV, Palampur. To evaluate the effect of clomiphene citrate, the drug was orally administered to adult cows (n=20) of University Livestock Farm and Jersey cattle Breeding Farm. In addition the cows reared under field conditions (n=20) received norgestomet subcutaneous ear implants. The implants were kept in situ for 9 days and fixed time AI was done 72 and 96 days post implant withdrawal. The blood samples were taken prior to treatment and at estrus, if observed. The pregnancy diagnosis was done 60 days post insemination and conception rates were recorded. Out of 790 cases presented for various reproductive disorders 33.54 per cent were true anoestrus where as 15.69 per cent were silent estrus. The plasma sodium, potassium and calcium levels increased at estrus compared to anestrus phase where as there was no variation in phosphorous and zinc levels, irrespective of the treatment. Clomiphene citrate though successfully induced estrus in true anoestrus cows but conception rates were poor. Norgestomet ear implants were effective in inducing estrus in true anoestrus cows and conception rates during induced and subsequent cycle were 35 and 50% respectively. None of true anoestrus control animals (n=10 in each group, respectively) exhibited estrus.