

2nd International Conference on **Animal & Dairy Sciences**

September 15-17, 2014 Hyderabad International Convention Centre, India

Relationship of mineral and hormone profile of bovines with reproductive disorders in organized dairy farms in Karnataka and Tamil Nadu

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Reproductive disorders, one of the important factors causing economic loss in the bovines (cattle and buffaloes) of organized dairy farms. In the present study relationship of reproductive disorders with mineral and hormone status in bovines of organized dairy farms was done. Paired sera samples (128, 195, 109 and 138) at one month interval were collected from bovines of organized farms in Dharwad, Bijapur in Karnataka and Pondicherry, Chennai in Tamilnadu. Serum was screened for Brucella and Infectious bovine rhinotracheitis (IBR) antibodies and analyzed for mineral and hormone profiles. The reproductive problems observed were 49 (8.5%), 167 (29.3%), 16 (2.8%) and 7 (1.2%) of abortion, repeat breeding, metritis and anoestrus respectively. Out of 570, 254 (44.6%) and 158 (27.7%) were positive for Brucella and IBR antibodies respectively. Serum copper, zinc, calcium, magnesium, phosphorus were 1.35 ppm, 1.40 ppm, 9.01 mg%, 1.64 mg%, 3.42 mg% and 1.24 ppm, 1.02 ppm, 9.70 mg%, 1.65 mg%, 3.09 mg% in apparently healthy and reproductive problem bovines respectively. The serum zinc and phosphorus levels showed significant decrease in animals with reproductive problems. Serum estradiol and progesterone concentration were 3.50 pg/ml, 2.94 IU/ml and 2.18 pg/ml, 2.46 IU/ml in apparently healthy and reproductive problem animals respectively. Significant decrease in levels of estradiol and progesterone concentrations in bovines with reproductive disorders was observed. There was association between reproductive disorders with minerals and hormone status in bovines of organized dairy farms. Thus, minerals and hormone status evaluation may aid in early detection of bovines with reproductive disorders.

Biography

P Krishnamoorthy did his BVSc and MVSc (Veterinary Pathology) from Madras Veterinary College, TANUVAS, Chennai and PhD from Veterinary College, KVAFSU, Bangalore. He is currently working as Scientist, National Institute of Veterinary Epidemiology and Disease Informatics, formerly PD_ADMAS, Bangalore. He has specialized in epidemiology, nutritional pathology and laboratory animal management. He is recipient of ICAR outstanding Team Research Award as member of team during 2010 and Fellow of Academy of Sciences for Animal Welfare (FASAW). He has 30 research publications in peer reviewed journals and book, book chapters, technical bulletins, training manuals and completed one external and seven Institute funded research projects.