Evaluation of Mastitis Related Measures and their Applications to Buffalo Milk Quality Control in Nepal

Dr. I.P. Dhakal
Associate Prof. Veterinary Medicine, IAAS Rampur, Chitwan

Abstract

A study was conducted to evaluate the epidemiological aspects of buffalo mastitis in Chitwan District, Nepal for assessing the causes, and to characterize the CMT, SCC, EC values, and bacteriological analysis for defining buffalo milk. A total of 428 quarter foremilk samples of clinically normal and 401 quarters from clinically affected buffaloes with mastitis were analysed. The maximum number (16%) of clinical cases of mastitis were observed in the month of July. The incidence of clinical mastitis was higher in animals during 1st calving and during the 1st month of parturition. On a quarter basis, 16% and 11% of the foremilk samples in buffaloes were diagnosed as having subclinical mastitis and clinical mastitis respectively. The mean pH of clinically normal buffalo milk was 6.75 and subclinical mastitic and clinical mastitic milk was 6.85 and 6.88, respectively. The upper limit of SCC was determined ≥ 200 × 10³/ml of milk based on the mean ± 2sd of a total SCC. Neutrophil counts were significantly higher (P<0.01) in subclinical mastitic milk than in normal milk. An EC score > 3.7 mS/cm was considered indicative of inflammation of the udder. The CNS such as *S. albus* and *S. epidermidis* were the predominant organisms associated with subclinical mastitis, and CNS and Coliforms in clinical mastitis. The proposed criteria for normal milk are absence of clinical signs, CMT negative, SCC < 200 × 10³/ml, EC < 3.7 mS/cm and < 250 cfu/ml bacteria. The parameters for defining subclinically mastitic milk are absence of clinical signs, CMT positive, SCC ≥ 200 × 10³/ml, EC > 3.7 mS/cm and > 250 cfu/ml bacteria. Similarly, Clinical mastitic milk was defined as milk having presence of clinical signs, CMT positive, SCC ≥ 200 × 10³/ml, EC > 3.7 mS/cm and bacterial count > 250 cfu/ml. The present study characterized 5 parameters in foremilk samples and categorized the buffalo milk.
Veterinary Education in Nepal: Considerations for Improvement

Dr. I. P. Dhakal
Associate Prof. Veterinary Medicine, IAAS Rampur, Chitwan

Abstract

Nepal, as it enters the new era of socio-political awakening, desperately seeks technical expertise to bring prosperity. Veterinarians are key players to address the nation’s concerns for food security and its sustainable dimension. Institute of Agriculture and Animal Science (IAAS) and Himalayan College of Agriculture Science and Technology (HICAST) are two institutions that provide all the national production of fresh veterinary graduates numbering (> 60) per year. However, evident from the problems and constraints in quality veterinary education faced by existing schools, need to be planned and strengthened. Major constraint lies in the necessary resource gap and it’s impact on knowledge acquiring. This paper deals about the situation of veterinary education in Nepal and ignite debate for improvements. The objective should be to maintain quality education and its strict evaluation need to be stressed enabling fresh veterinary graduates to explore international markets to serve and enhance their expertise. National capacity to utilize the competent expertise should also be enhanced and widened. The knowledge of Veterinary science has grown in such an extent that it can no longer be taught in all aspects in the reasonable time limits of undergraduate curriculum. Veterinary curriculum shows many deficiencies which needs immediate attention. Technology transfer of indigenous and ethno practices in livestock and poultry farming are other aspects to be strengthened. Immediate steps should be taken to re-structure Veterinary Teaching Hospital and Veterinary educational institution located at Rampur under the umbrella of newly established Agricultural and Forestry University. Strong linkages and research collaboration should be initiated with the Universities of developed countries. Identifying and creating research opportunities including partnership and cooperation with other academic institutions are essential.