

Success Story: Mastitis Diagnosis Protocol in Camel Developed

Diagnosis of clinical mastitis is easy as inflammatory signs in udder and teat and, physical and chemical changes in udder and milk are evident. However, diagnosis of subclinical mastitis is difficult as overt changes in udder and milk are absent. Nevertheless, subclinical mastitis in cattle, buffaloes and also in camel accounts for huge economic losses due to suboptimal milk production and deterioration of milk quality. Therefore, regular clinical and laboratory examinations of udder and milk samples are required for early diagnosis of subclinical mastitis and curtailing resultant milk production losses. Diagnosis of subclinical mastitis requires laboratory examination like CMT, Modified White Side Test, Somatic Cell Counting and bacterial culture from milk samples etc. Most of these tests have been developed and standardized for use in cattle and buffalo and little attempt have been made to standardize these tests in camel. We developed and standardized CMT and SCC for use in camel since properties of camel milk are different from those of cattle and buffaloes. Based upon these two tests, diagnosis of subclinical mastitis in camel can be done easily and efficiently.

Awareness among camel farmers regarding subclinical mastitis and resultant production losses in lactating camel was generated during various extension programs organized by the Centre time to time. Farmers were imparted training regarding use of this technology during various in-field and in-campus training and extension programs. Early and proper treatment of affected animals can help curtailing production losses occurring due subclinical and clinical mastitis. Camel farmers in different areas of Rajasthan have adopted the technology and are fetching good prices of their milk, due to improved quantity and quality of the produce. The technology is helpful in following ways:

1. Curtailing production losses occurring due to subclinical mastitis in camel: Farmers usually remain unaware about the problem due to absence of apparent clinical symptoms or problems. The condition can only be diagnosed by applying the developed diagnostic tools.
2. Improved quality of the camel milk produced: Milk with high somatic cell count is considered to be poor in quality due to lower keeping quality, nutritive value and taste.
3. The developed technology is helpful in ensuring clean camel milk production from camel.

Institutional Research Project: Evaluation of udder health and milk quality in dromedary camel" during the year 2017-2021 (PI: Rakesh Ranjan, Co-PIs : S.D. Narnaware, Ved Prakash, Basanti Jyotsana, NRCC-Bikaner)

Publications:

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2. **Rakesh Ranjan**, Shirish D Narnaware, Ved Prakash, Amita Ranjan and R.K. Sawal. 2019. Therapeutic management of *Staphylococcus epidermidis* mastitis and hemolactia in a dromedary camel. *Intas Polivet* 20(II): 453-455.
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