

Executive Summary

Title of the Project: Epidemiological study on goat mastitis in north-western states of India

Name and Address of The Principal Investigator: Dr. Dhiraj Kumar Gupta (Assistant Scientist) Department of Veterinary Medicine, College of Veterinary Science, Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana 141004

UGC approval letter no. and date: 41-186/2012 (SR) dated 13.07.2012

Date of Implementation: 13.07.2012

Tenure of the project: 3½ yrs (July, 2012 to December, 2015)

Total grant allocated: Rs. 9,05,000/-

Total grant received: Rs. 8,72,000/- (7,40,000+1,32,000)

Final expenditure: Rs. 8,65,240/-

Objectives of the project:

To study the epidemiology of got mastitis in north-western states of India

Summary of the findings

- The average prevalence of sub-clinical mastitis in goats was found to be 21.07% at animal level and 15.22% at quarter level.
- Left and right sided teats did not show any significant difference in affections with mastitis.
- Coagulase Negative Staphylococci species were the most common bacterial species associated with SCM in goats in this area.
- Overall, tetracycline (90.43%) was the most sensitive and penicillin (24.40%) least sensitive drug.
- Age, parity, season showed significantly positive correlation with the occurrence of SCM.
- The SCC, Log₁₀SCC, CMT, EC, NAGase, Log₁₀NAGase and MBRT values were observed to be significantly higher in infected udder halves than that of non-infected.
- Intramammary infections deteriorate the milk quality by increasing SCC and lowering milk biochemical parameters.
- SCC alone has high specificity but moderate sensitivity to detect SCM.
- The CMT, lactose content, pH, and NAGase were significantly positively correlated with SCC.
- At cut-off value of 700 and 750 ($\times 10^3$ cells/ml), SCC was having comparatively high Sensitivity, specificity, positive predictive value, negative predictive value. So, we can consider this value as most suitable cutoff value to differentiate infected udder halves from non-infected ones. For NAGase, it was found to be 25 (nMoles/ml/min).

Contribution to the society

The dairy goat farmers were made aware about the disease and they were sensitized to adopt preventive methods for prevention and control of mastitis in goats. The farmers were supplied with diagnostic kits to screen the subclinical mastitis at the farm by themselves. The university established the link with these farmers and they have been providing guidance on routine basis and treatment in the face of any disease outbreak.