and treatment of subclinical mastitis in dairy cows. It was concluded that, Teat protect spray was effective in treatment of subclinical mastitis and along with TANUCHEK – SCC counter and easier for the veterinary professionals and farmers to detect SCC at field level. By detection of subclinical mastitis, treatment could be initiated at the earliest to prevent further losses by preventing the condition to become a clinical mastitis.

Key words: Dairy cows, Subclinical mastitis, Mastiguard, Teat spray, TANUCHEK kit.

Mastitis is the one of the economically important diseases of dairy cattle which continues to be the major disease that affects milk production especially of the high yielding crossbred cattle. The economic loss due to subclinical mastitis in terms of monetary loss per lactation is huge owing to reduction in milk yield and veterinary expenses. Higher losses were observed in crossbred cows as their high production potential is affected during mastitis period (Sinha *et al*, 2014). In view of the above, the present study was conducted during 2018-19 to assess the efficacy of MASTIGUARD (contains Teat protect spray and TANUCHEK SCC Kit) a product from TRPVB, TANUVAS, Chennai, 2018.

Materials and Methods

The study was conducted in crossbred dairy cattle of 3 rd and 5th lactation especially in mid lactation period were screened for subclinical mastitis using TANUCHEK SCC Kit and 20 animals with somatic cell count of more than 2,00,000 cells /ml were selected for the study. One group of animals with 10 numbers was kept as control and other 10 animals from second group were sprayed with Teat protect spray on all the four teats and udder after each milking for 6 wk. SCC of milk was recorded at weekly intervals and the results were interpreted.

In this study, TANUCHEK SCC kit and teat protect sprays (MASTIGUARD) were used in crossbred animals in mid lactation. TANUCHEK SCC Kit is an on farm test kit for quick determination of the somatic cell counts which increase in milk samples upon infection of the udder. The specific substrate used changes to blue colour by the membrane bound enzymes from the cells. Accordingly, a drop of milk sample was added to the tube having reagent and 3 drops of enhancer solution was added, mixed well and kept 30 minutes for colour development. The colour development in the test samples was compared with standard colour chart to estimate the SCC count. TANUCHEK SCC kit detects SCC of milk in cases of subclinical mastitis and SCC of milk of animals which recovered from clinical mastitis could also be detected. Teat protect is an unique germicidal teat protective spray for mastitis promotes healing of minor cuts and abrasions in teat, udder hygiene and health.

Results and Discussion

From the study, it was observed that the use of teat protect spray was effective in reducing the somatic cell count in treatment group to 1.5 lakh cells/ml from 2.0 lakh cells/ml in the study conducted. These results were in resemblance with the findings of Thangadurai *et al* (2019) who recorded a somatic cell count of 1.6 lakh cells/ml in teat protect spray treated group in comparison to control group 2.75 lakh cells/ml. TANUVAS teat protect was found to be effective in reducing SCC of milk in subclinical mastitis cases that indicated udder health. Use of various teat dips and sprays found to be effective in prevention and treatment of subclinical mastitis, and teat protect sprays were found to be more effective than potassium permanganate teat dips (Sukumar *et al*, 2019). Somatic cell count (SCC) is the most widely used single reliable indicator of udder health and SCC can be successfully used in field for diagnosis of

Table I. Effect of Teat spray on somatic cell count for prevention of Mastitis in Dairy cows

S. No.	Particulars	Treatment	Control
1.	No. of cows in each group	10	10
2.	Somatic cell count before treatment (lakh cells/ml)		
3.	Somatic cell count after treatment (lakh cells/ml)	2.7	2.7

subclinical cases of mastitis (Yadav *et al*, 2018; Sharma *et al*, 2010). From the above study it was concluded that the use of MASTIGUARD was found to be effective in prevention and treatment of subclinical mastitis in dairy cows.

Summary

A study was conducted to assess the efficacy of TANUVAS MASTIGUARD (Teat protect spray with TANUCHEK SCC kit) in dairy cattle during 2018-19 as O farm Trial (OFT) in the Annamangalam village of Perambalur district. Animals in mid lactation were screened with somatic cell count (SCC) test kit and animals having SCC of more than 2.0 lakh and twenty animals were selected for the study. One group of 10 animals was kept as control and the other group of 10 animals were sprayed with teat protect (Mastiguard) for 6 wk. The observations recorded at weekly intervals. At the end of 6th week, reduction in SCC of milk was recorded in animals of treatment group (1.5 lakh cells /ml) whereas the SCC remains same in control group (2.7 lakh cells/ml). Hence, use of MASTIGUARD was found to be effective in prevention and treatment of subclinical mastitis in dairy cows.

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