

Estimation of Economic Losses Due to Mastitis in Dairy Farms of Hyderabad, Telangana, India

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Submitted: 15 Nov 2019; Accepted: 30 Nov 2019; Published: 04 Dec 2019

As an agricultural country, India always had livestock as one of the main support systems for income. Post-independence, dairy farms and dairy co-operatives were one of the largest rural employment scheme of the country, helping in alleviating rural poverty.

Setbacks like low literacy rates in farmers, poor milk quality and standards, inefficient productivity, lack of proper collection, storage and cold chain facilities, least bargaining power by the producers, intermediaries involvement, low emphasis on research and development, less outreach to veterinary help, low market for value-added milk products, lack of professionally approved information and so on, have become dairy sectors challenges which put India few steps to the backward in the international market. But, over the recent years, there has been a rise in the dairy entrepreneurs hailing from IT industry, corporate firms, agricultural and veterinary professions, commerce, etc. who are setting high standards in dairy sector by incorporating international dairy farming techniques which help face the challenges and gain good profits.

One of the losses faced by the dairy farms is caused by Mastitis (inflammation of teats, udder) due to various factors which effects the milk production and animal productivity.

A study was conducted to estimate the economic losses in dairy farms (have their own brand outlet) due to mastitis and to suggest preventive measures for reduction of the economic losses in and around Hyderabad region of Telangana, India.

Hyderabad, situated on hilly terrain around artificial lakes, is the capital of the Indian State of Telangana, India. It occupies an approximate area of 650 square kilometers (250 sq mi) along the banks of the Musi River and is the fourth-most populous city and sixth-most populous urban agglomeration in India. Hyderabad has a tropical wet and dry climate bordering on a hot semi-arid climate. The annual mean temperature is 26.6 °C (79.9 °F); Summers

(March–June) are hot and humid, with 30s - 43°C (104 °F). Winters (December–January) temperatures range 14.5 to 28 °C (57–82 °F). Heavy rain from the southwest summer monsoon falls between June and September, supplying Hyderabad with most of its mean annual rainfall.

The field survey technique was used wherein 200 dairy farm owners, chosen using Stratified random sampling method, responded to a basic questionnaire and for further analysis, secondary data from government veterinary hospitals annual record of mastitis cases reported has been used. Analytical tools gave some statistics to be interpreted.

About 54.50 percentage of dairy farms with own brand outlet have more than 100 cattle maintained, 37.50 percentage of dairy farms with cattle number ranging 50-100 animals and 8 percentage dairy farms with 50 or less than 50 cattle-maintained managing to run outlet in good growing profits. Almost 93.50 percentage of the dairy farms seek veterinary help, but 6.50 percentage of the dairy farms have been reported to have not seeking veterinary help in case of mastitis affected animals. Seasonal influence is seen in 87.50 percentage of dairy farms reporting more occurrence of mastitis in monsoon season whereas 12.50 percentage of dairy farms reported more occurrence of mastitis in winter season. None have been reported in summer.

The economic loss caused due to mastitis to the dairy farm per affected animal is calculated as Rs.8795(≈\$123) to Rs.9495(≈\$132) economic loss approximately due to an animal with Mild or Clinical Mastitis, Rs.12850(≈\$179) to Rs.14050(≈\$196) economic loss approximately due to an animal with Moderate or Sub-Clinical Mastitis and Rs.19775(≈\$276) to Rs.22775(≈\$317) economic loss approximately due to animal with Severe or Chronic Mastitis. The loss is bound to extend further in case of severe or chronic mastitis post treatment.

The approximate estimated loss to the dairy sector (farms which have their own outlets) in and around Hyderabad region due to Mastitis is Rs.1,31,83,795 (~\$186,946) to Rs.1,43,39,295 (~\$203,331) annually. Nationally, the economic loss to the dairy sector due to mastitis

would be significantly high to be overlooked as it affects the farmer, animal health, milk productivity, public health and national growth. The loss can be avoided by educating the farmers the importance of following the set guidelines.

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