

## Mastitis in dairy cows: Symptoms, causes, preventions and treatments

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Mastitis is the most prevalent production limiting disease affecting dairy herd's world- wide, despite the widespread implementation of mastitis control strategies. The most important effects of mastitis include reduced milk production, premature culling of chronically affected cows and significant expenditure involving drug costs for the treatment of clinical and subclinical cases plus the costs of preventative treatments and the costs associated with the discarding of milk from affected animals.

The predominant contagious pathogens are *Staphylococcus aureus*, *Streptococcus agalactiae* and *Corynebacterium bovis*, while the predominant environmental pathogens are *Escherichia coli*, *Streptococcus uberis* and *Streptococcus dysgalactiae*. Bovine mastitis has become recognised as is an increasing problem in low somatic cell count herds and this has resulted in the rapid increase in the administering of treatments such as teat seals with or without concomitant dosing of intramammary antibiotics.

Traditionally, treatment of mastitis has relied heavily on the use of antibiotics and management procedures involving hygiene measures such as the use of teat disinfectants and thorough and effective cleaning of the milking equipment. The strong reliance on the use of antibiotics has created problems of bacterial resistance and the possibility of milk residues, both of which have potential impacts on the consumer. These two factors have given impetus to the developing of alternative more sustainable treatment options such as vaccines, use of natural antimicrobials like plant essential oils and a myriad of other more natural long-term approaches. These are discussed as part of the overall review of mastitis that follows.

Specifically, the presentation begins by providing information on the symptoms, causes, prevention and treatment of bovine mastitis. This is followed by the presenting of a range of non-traditional treatment approaches with a focus on the recent development of more natural options involving plant extracts.

### Biography

Fadil Alawi is the founder of Pharm Innovation. He is an author of over 60 scientific research publications in diverse fields and has won several innovation awards. He is listed as an inventor or co-inventor on 26 patents. Fadil has also been engaged as an expert witness in court proceedings on veterinary product development. Fadil has a special interest in dairy mastitis treatments. He is currently engaged in a joint research with a world-renowned Melbourne academic research group on the development of innovative teat sealant formulation free of bismuth sub nitrate for dairy cows. Fadil is a member of the Controlled Released Society (CRS), Australasian Pharmaceutical Scientists Association (APSA), NZ Controlled Released Society, and NZ Society of Cosmetic Chemists and a chartered member of the MRACI Cchem.

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