

## Epidemiological Studies on Subclinical Mastitis in Dairy cows in Assiut Governorate

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### Abstract

In this investigation, some epidemiological studies were run on subclinical mastitis for totally 350 dairy cows of different breeds, ages and distributed in different villages in Assiut governorate, Assiut, Egypt, along a whole year (during the period from June 2006 till July 2007) through field screening surveys by using of the California mastitis test (CMT) for each quarter milk sample followed by bacteriological examination to identify the major causative agents of intramammary infection (IMI). The dairy cows were differed from the breed point of view as 230 Holstein Friesian breed and 120 native breed. Also, they were differed from the age point of view as a group of 95 cows aged from 2 to 4 years old and another group of 255 cow aged from 5 to 8 years old. All dairy cows were apparently healthy with clinically sound udder secreting apparently normal milk. All the cows lived nearly under the same conditions of breeding from the habitat, hygiene and feeding systems. The obtained results revealed that 67 cows (19.14%) had 80 infected quarters (5.71%). It was found that the most frequently major causative agents isolated were *Staphylococcus aureus*, *Streptococcus agalactiae* and *Escherichia coli* from the positive CMT samples with prevalence 52.5, 31.25 and 16.25%, respectively. With studying the breed factor, it was found Friesian breed was sensitive towards infection (20.43% at the cow level and 6.09% at the quarter level) than of native breed (16.67% at the cow level and 5% at the quarter level). It was also noticed that the prevalence of subclinical mastitis in hot weather as during summer (9.14% at the cow level and 2.64% at the quarter level) and during spring (4.86% at the cow level and 1.36% at the quarter level) was higher than in cold weather as during winter (2% at the cow level and 0.64% at the quarter level) and during autumn (3.14% at the cow level and 1.07% at the quarter level). In relation to age susceptibility, 5-8 years old cows (15.43% at the cow level and 4.36% at the quarter level) were susceptible than those of 2-4 years (3.71% at the cow level and 1.36% at the quarter level). The degree of quarter attack according to positive CMT was varied from 35 quarters (2.50%) showed degree (+++), to 45 ones (3.22%) showed degree (++) , to 120 ones (8.57%) showed degree (+) and the rest (85.71%) showed degree (-). The obtained results threw the light on the epidemiology of subclinical mastitis in Assiut villages and provided an importance of the CMT for diagnosis of subclinical mastitis due to it is a reliable, easy, rapid and cheap tool helping in diagnosis and controlling the disease because it directs attention to individual mammary quarter that is secreting milk of high somatic cell content (SCC). Programs for control of subclinical mastitis may be planned around the routine examination of all lactating cows, and consequently early treatment can be applied towards positive cases rapidly for preventing their conversion towards clinical form among dairy cows and for protecting the herd health, milk hygiene and consequently the consumer health.

**Key words:** Epidemiology, Subclinical mastitis, California mastitis test (CMT), Intramammary infection, Dairy cows.