

Prevalence of Subclinical Mastitis in the Local Goats in the Province of Laghouat (ALGERIA)

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Abstract

Subclinical mastitis is a disease of the udder that passes mostly unnoticed. Or several germs associated with it and their presence in milk constitutes a major risk to consumer health. Our study aims to determine the prevalence of subclinical mastitis in local goats in Laghouat region (Algeria). We undertook a study based on the detection of sub-clinical mastitis by Californian Mastitis Test (CMT) in 60 goats aged 1 to 9 years and weighing 18 to 45 kg of live weight and whose lactation number varies from 2 to 8. We found a prevalence of subclinical mastitis reaching 46.6%. A clearly significant difference ($P < 0.05$) is reported on this prevalence compared to age. The highest rate is recorded especially in goats aged between 3 to 7 years with 62% of detected subclinical mastitis, followed by the older goats (over 7 years) with a prevalence of 27%, and at the end the youngest goats (1-3 years) with a prevalence of 11%. A significant difference was also recorded between the different lactation ranks ($P < 0.05$). The goats having the highest rank of lactation were most affected by subclinical mastitis. Prevalence of 46%, 31%, 11% and 8% respectively are found for the 6th rank of lactation and more, 4 lactations, 5 lactations and 1 lactation. We noticed that the majority of diagnosed mastitis were caused by poor hygiene conditions. This study allows us to conclude that there is a high prevalence of subclinical mastitis in the local goats in the province of Laghouat (Algeria).

Keywords: *goats, prevalence, sub-clinical mastitis.*

INTRODUCTION

The sub-clinical mastitis is an inflammation of the udder usually associated with a microorganism. The appearance of milk and gland itself is not impaired, but there are changes in the milk composition. The prevalence of clinical mastitis is less than 5% in goats, while the sub-clinical mastitis are much more common with a prevalence which ranges from 18 to 34% (Bauer *et al.*, 1997; Bergonier, 1997; Chingwen *et al.*, 2002). Among the most used for the diagnosis of subclinical mastitis methods, the CMT (Clifornian Mastitis Test).

AIMS AND OBJECTIVES

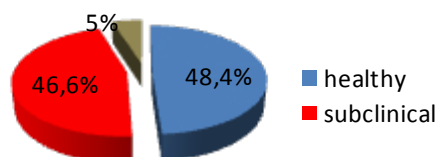
Our research aims to determine the prevalence of subclinical mastitis in local goats in Laghouat region (ALGERIA).

MATERIALS AND METHODS

The experimental herd consists of 60 goats aged 1 to 9 years old, weighing 18 to 45 kg live weight and whose lactation number varies from 2 to 8. The screening for subclinical mastitis is performed by the Californian Mastitis Test (CMT). The manner of interpretation of CMT results is as follows: See the degree of gelation (formation

Tab. 1. The CMT interpretation grid (Montaldo and Martinez-Lozano, 1993)

Note	Mixture aspect	Interpretation
'0'	No precipitate, oily appearance	Negative
'+/-'	Light flocculations disappearing at agitation	Traces
'+'	Granular precipitate	Doubtful
'++'	Filamentous precipitate	Slightly positive
'+++'	Viscous precipitate	Very positive

**Fig. 1.** Percentage of mastitis in the tested farms

of flocculant by precipitation of milk mixed with teepol reagent) (Tab. 1).

RESULTS AND DISCUSSION

We found a prevalence of subclinical mastitis reaching the 46.6% (Fig. 1).

Prevalence of subclinical mastitis in relation to age: A clearly significant difference ($P < 0.05$) was found between the different age groups. The highest rate is recorded especially in goats aged between 3 to 7 years with 62% of detected subclinical mastitis, followed by the older goats (over 7 years) with a prevalence of 27%, and at the end the youngest goats (1-3 years) with a prevalence of 11%.

Prevalence of subclinical mastitis in relation to lactation rank: A significant difference was also recorded between the different lactation ranks ($P < 0.05$). The goats having the highest rank of lactation were most affected by subclinical mastitis. Prevalence of 46%, 31%, 11% and 8% respectively are found for the 6th rank of lactation and more, 4 lactations, 5 lactations and 1 lactation. Mibilu *et al.*, 2007 in Tanzania found 76.6% of subclinical mastitis in goats. Swai *et al.*, 2008 found 51.5%. Gebrewahid *et al.*, 2012 in Ethiopia report 18%. Razi *et al.*, 2012 in Bangladesh indicate 18.64%. The vast majority of sub-clinical mastitis may be due to a lack of hygiene and also to the extensive and traditional type of farming practices.

CONCLUSION

A high prevalence of subclinical mastitis (46.6%) exists in goats in Laghouat (Algeria). The

highest rates are found at age between 3 and 7 years old but also in females in the fourth rank of lactation and more. The major predisposing factor is the lack of hygiene.

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