

## **Acknowledgements**

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## ***Dedication***

***To my father***

***To my mother***

***To my husband***

***To my brothers and sisters***

***To my colleagues and friends***

***To all who have helped me***

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## Abstract

A cross –sectional study was conducted on 209 lactating goats in Khartoum state, Sudan, during the period from May to July 2013. The objectives of the study were to estimate the overall prevalence of caprine mastitis (clinical and sub-clinical) and to investigate potential risk factors associated with the disease. A total of 209 lactating goats were randomly selected and screened using California Mastitis Test (CMT) for sub-clinical mastitis and clinically examined for clinical mastitis. The overall prevalence rate was 69.8% (10% clinical and 59.8% sub-clinic). The highest prevalence of clinical mastitis was reported in Bahri locality (11.6%) and the highest prevalence of sub-clinical mastitis in Khartoum locality (66.6%). While Khartoum locality showed the lowest prevalence of clinical mastitis (5.2%) the lowest prevalence of sub -clinical mastitis was reported in Bahri locality (40.2%). The following risk factors : locality (P-value = 0.01), herd size (P-value = 0.08), bedding (P-value = 0.008), bedding replacement (P-value = 0.19), age (P-value = 0.14), parity (P-value = 0.039), body condition (P-value = 0.000), breed (P-value = 0.101), lesion in the teat (P-value = 0.000), type of udder (P-value = 0.002) and previous mastitis (P-value = 0.165) showed statistically significant association (P-value < 0.25) with the occurrence of mastitis in the univariate analysis. The result of this study also showed that body condition (P-value = 0.000), lesion in the teat (P-value = 0.000), type of the udder (P-value = 0.002), bedding (P-value = 0.008) and bedding replacement (P-value = 0.002) had statistical significant associations with mastitis (P-value < 0.05) in the multivariate analysis.

## ملخص البحث

اجريت هذه الدراسة الوبائيه في 209 من الماعز الحلوب في ولاية الخرطوم في الفتره من مايو الى يوليو 2013 . الدراسة تهدف الى تقدير نسبة انتشار التهاب الضرع العياني ودون العياني وتحديد عوامل خطوره التي تساعد على حدوث المرض .

مجمل 209 ماعز حلوب تم اختيارها عشوائيا وتم فحصها بواسطة CMT للاصابات دون العيانيه وبواسطة العين المجرده للاصابات العيانيه سجلت النتائج الاتيه: نسبة انتشار المرض في الولايه 69.8% (10% للفحص العياني و59.8% للفحص دون العياني). اعلى نسبة انتشار للاصابات العيانيه سجلت في محليه بحري 11.6% والاصابات دون العيانيه في محليه الخرطوم 66.6% بينما سجلت محليه الخرطوم ادنى نسبة انتشار للاصابات العيانيه 5.2% ومحليه بحري سجلت ادنى نسبة انتشار للاصابات دون العيانيه 40.2% .

عند التحليل لكل عامل خطوره على حده حددت الدراسه بعض عوامل خطوره التي تساهم بشكل وثيق في حدوث المرض منها المحليات (P-value = 0.01) ، حجم القطيع (P-value = 0.08) ، وجود الفرشه (P-value = 0.008) ، تغيير الفرشه (P-value = 0.19) ، العمر (P-value = 0.14) ، عدد الولادات (P-value = 0.039) ، حاله الصحيه (P-value = 0.000) ، نوع السلاله (P-value = 0.101) ، وجود الاصابات على الحلمات (P-value = 0.000) ، التعرض المسبق لالتهاب الضرع (P-value = 0.165) و نوع الضرع (P-value = 0.002) واثبتت ان حاله الصحيه (P-value = 0.000) ، وجود الاصابات على الحلمات (P-value = 0.000) ، نوع الضرع (P-value = 0.002) ، وجود الفرشه (P-value = 0.008) و تغيير الفرشه (P-value = 0.002) هي اكثر عوامل الخطوره التي تساهم في حدوث المرض وذلك عند تحليل عوامل الخطوره مجتمعه