

## **Acknowledgement**

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**Dedication**

*To the soul of my father*

*To my mother*

*To my brothers*

*To all who inspired me to face*

*The ups and downs of life.*

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## **Abstract**

A cross sectional study was conducted from June 2013 to August 2013 for determination of ovine Haemonchosis and investigation of associated potential risk factors in Khartoum state, Sudan. A total of 240 fecal samples from Sheep were collected and examined by egg count and then culture of feces.

The result indicated that natural *Haemonchus contortus* infection was prevalent among Sudanese sheep at Khartoum state with an overall prevalence 12.1%. The following risk factors showed association with sheep Haemonchosis in the univariate analysis under significant level of P-value  $\leq 0.25$ : age (P-value= 0.000), breed (P-value =0.004), fecal consistency (P-value = 0.000), grazing type(P-value= 0.009), use of anthelmintics (p-value=0.000), other disease status (P-value 0.257), other

animal Species (p-value= 0.109), season (P-value = 0.114), type of soil (P-value= 0.208) and rainfall status (P-value= 0.114).

Multivariate analysis showed there was significant association between sheep Haemonchosis and the following risk factors: age (p-value=0.000), breed (p-value=0.004), fecal consistency (p-value= 0.000), grazing system (p-value= 0.009) and using of anthelmintics (p-value= 0.000).

### ملخص البحث

أجريت دراسة وبائية في الفترة من يونيو 2013م حتى أغسطس 2013م على عدد 240 رأس من الضأن في ولاية الخرطوم ؛ لتقدير معدل انتشار مرض هلاع الضأن في ولاية الخرطوم والتقصي حول عوامل الخطر المرتبطة به . تم تشخيص المرض بواسطة تحليل براز الحيوان لفحص بيض و يرقات الطفيل .

أظهرت الدراسة أن نسبة انتشار المرض في الضأن بولاية الخرطوم تعادل 12.1%. في التحليل الفردي باستخدام مربع كاي لتحليل عوامل الخطر وجدت علاقة معنوية- تحت قيم معنوية أقل من أو يساوي 0.25 – بين حدوث المرض و كل من عوامل الخطر التالية : عمر الحيوان ( القيمة المعنوية = 0.000 ) ' سلالة الحيوان (القيمة المعنوية = 0.004) ' قوام البراز (القيمة المعنوية = 0.000) ' طريقة الرعي (القيمة المعنوية = 0.009) ' استخدام مضادات الديدان ( القيمة المعنوية = 0.000) ' وجود أمراض أخرى(القيمة المعنوية = 0.257) ' وجود حيوانات أخرى (القيمة المعنوية = 0.109) ' الفصل المناخي (القيمة المعنوية = 0.114) ' طبيعة الأرض (القيمة المعنوية = 0.208) و تواجد الأمطار (0.114).

في التحليل متعدد العوامل ظهر هناك ارتباط معنوي بين الإصابة بالهلاع في الضأن بولاية الخرطوم وعوامل الخطر التالية : عمر الحيوان (القيمة المعنوية =0.000) ' سلالة الحيوان (القيمة المعنوية = 0.004) ' قوام البراز(القيمة المعنوية = 0.000)' نوع الرعي (القيمة المعنوية = 0.009) و استخدام مضادات الديدان (القيمة المعنوية=0.000).