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THE PREVALENCE AND ASSOCIATED RISK FACTORS OF COCCIDIOSIS IN INDIGENOUS BIRD POPULATION IN NAMOKORA SUB COUNTY, KITGUM DISTRICT.

BY

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A DISSERTATION SUBMITTED TO THE FACULTY OF AGRICULTURE AND ANIMAL SCIENCES IN PARTIAL FULFILLMENT OF REQUIREMENTS FOR AWARD OF THE DEGREE OF BACHELOR OF ANIMAL PRODUCTION AND MANAGEMENT OF BUSITEMA UNIVERSITY

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DECLARATION

I Ojara Ambrose, declare that this is my own research conducted for a period of three month and has never been submitted to any other institution of learning for the award of degree in animal production and management

Sign; ..... Date; 07/11/2024

This research dissertation has been submitted with approval of my supervisor

Sign; ..... Date; 07/11/2024

Dr.OMADANG LEONAD

DEDICATION

I dedicate this to Dr. Omadang Leonard for the supervision and the guidance he has given me during this research not forgetting the proposal examiner Dr. Gerald Zirintunda, Mr. Francis Mukalazi for their guidance which help me in this research. I also want to dedicate this to my lovely father Mr. Obalim William and my lovely mother Ms. Hellen Oyella, my lovely wife Ms. Ayoo faith for financial support they have given me and all my friends and course mate for the support they have given me during this research and education at most may God bless them abundantly.

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LIST OF ABBREVIATIONS

Dr.	Doctor
Mr.	Mister
APM	Bachelor in Animal Production and Management

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ABSTRACT

Coccidiosis, a parasitic disease caused by protozoa of the genus Eimeria, poses a significant threat to poultry farming worldwide and in our country Uganda. This study examined the prevalence and associated risk factors of coccidiosis in local bird populations in the Namokora Sub-County of Kitgum District. The study involved the systematic collection of fecal samples from various households to identify the presence of Eimeria oocysts using floatation method. In addition to the laboratory analysis, a structured questionnaire was administered to local poultry farmers to gather data on management practices, housing conditions, bird age, and vaccination status. 70 pool samples were analyzed in the laboratory and this revealed high prevalence of 70%. The study also pointed out housing, biosecurity, feeding practices and stocking density as the major risk factors associated with this high prevalence of coccidiosis in Namokora Sub County with **P=0.0001**. The study concluded a high prevalence of coccidiosis in Namokora Sub County and recommended improve housing conditions, nutritional education to farmers, and biosecurity awareness to help mitigate the problem of coccidiosis in the local chicken.

CHAPTER ONE: INTRODUCTION

1.1 Background

Coccidiosis, a parasitic disease caused by protozoa of the genus Eimeria, poses a significant threat to poultry farming worldwide (Mesa-Pineda et al., 2021). The lifecycle of Eimeria involves sporulation, ingestion, and sporozoite development, leading to oocyst formation and shedding (Bangoura & Daugschies, 2018). The cycle begins with the shedding of resistant oocysts in the feces of infected birds, which contaminate the environment. When birds ingest these oocysts, they undergo encystation in the intestine, releasing sporozoites that invade intestinal epithelial cells. Inside the host, sporozoites replicate asexually, leading to cell destruction and the release of new merozoites, which can infect additional cells. Some merozoites then differentiate into male and female gametes, resulting in the formation of new oocysts that are excreted, completing the cycle. The severity of coccidiosis can vary from subclinical infections to severe disease, influenced by factors such as age and health status. Understanding these stages is crucial for developing effective management strategies, including improved hygiene and biosecurity measures, to control the disease in poultry populations. Clinical signs vary depending on the Eimeria species, infection severity, and bird age and health. Common symptoms include diarrhea, weight loss, decreased feed intake, lethargy, and mortality.

Up to 70% of flocks worldwide may be affected by avian coccidiosis at some point in their production cycle(Geetha & Palanivel, 2018). The disease is both common and economically significant for the poultry industry, resulting in lost productivity and additional costs associated with treatment and prevention. Annually, the industry's losses approach $3 billion. Around 50–70% of African countries are affected by the disease, and nations like Nigeria are thought to lose more than $50 million in revenue from poultry due to coccidiosis each year(Raji & Amissah-reynolds, 2024). While Uganda displays prevalence rates ranging from 40-80% in various locations and types of chicken farms (Muñoz-Gómez et al., 2024), other East African nations like Kenya and Tanzania indicate prevalence rates between 30-70% (Raji & Amissah-reynolds, 2024).

With its high prevalence and potential for devastating economic losses, coccidiosis stands as one of the most common and costly diseases affecting poultry populations globally (Williams, 1999).

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