



FACULTY OF AGRICULTURE AND ANIMAL SCIENCES

DEPARTMENT OF ANIMAL PRODUCTION AND MANAGEMENT

FINAL YEAR PROJECT REPORT

**EFFICACY OF CASSAVA LEAF POWDER ON *NEMATODES* IN PORCINE IN
KYERE TOWN COUNCIL, SERERE DISTRICT.**

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**THIS REPORT IS SUBMITTED TO THE FACULTY OF AGRICULTURE AND
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DECLARATION

I Amoding Naume, declare that this dissertation contains my own work and has never been submitted to any institution for any award of academic credit or qualification.

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APPROVAL

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DEDICATION

I dedicate this dissertation to my beloved Husband and my dear supervisors for their tireless support rendered to me during the research process. There is nothing worthy I can pay you with but only pray to the Almighty GOD to reward you abundantly Amen.

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List of Acronyms and Abbreviations

APM- Bachelor of animal production and management

BUAC- Busitema university Arapai campus

OPG- Orthopantomography i.e oocyts per gram of feces.

ND Nematodes

CLP- Cassava leaf powder

KTC-Kyere town council

DE- Proposal examiner

PE- proposal examiner

WHO-World health organization

MAAIF- Ministry of Agriculture Animal industries and Fisheries

ECCG-Ecological conditions of cassava growth

CSS- Cross sectional study

D.O- Direct observation

ED- Experimental design

GIT-Gastrointestinal track

EA-Experimental, analysis

CEGF-Counting eggs per gram of feaces

Abstract

The piggery enterprise under livestock sector is also growing in certain regions due to improved production technologies however; one of the biggest difficulties has been in the control of gastrointestinal nematodes that consequently lead to economic losses and low productivity. In this context, it becomes necessary to search for easily accessible and low-cost forms of treatment such as cassava leaf powder that has condensed tannins which is the active principle with anti-helminthic effect. In that regard, the efficacy of the use of cassava leaf powder in the control of nematodes in pigs was evaluated. The trial was conducted in kyere town council, Serere district. Twenty weaned piglets were used carrying natural infection by Nematodes, verified by counting the number of eggs per gram of feces (OPG). The piglets were divided into 3 treatments and a control: T1 (dewormed with cassava leaf powder 0.5% using 50g / kg); T2(dewormed with cassava leaf powder at 1% using 100g/kg), T3 (dewormed piglets with 1.5% using 150g/kg), T4 (dewormed with Albendazole), according to the manufacturer's instructions. The data obtained was analyzed in the statistical package GenStat. The calculation of efficacy was based on the percentage of reduction through the statistical package. As a result, it was observed that T2 (1%) and T3 (1.5%) had a better reduction capacity with an efficacy of 73.1% and 70.6% respectively as compared to Albendazole which obtained 58.8%. It can be concluded that cassava leaf powder has anti-helminthic efficacy in the control of Nematodes and is also feasible in reducing costs of constant reacquisition of conventional dewormers and can be an alternative for use in pig farms. From the results of this trials, cassava leaf powder is effective in controlling Nematodes and further research needs to be done to identify and quantify the active components in the leaf powder that degrades the Nematodes.

CHAPTER ONE:

1.0 INTRODUCTION

1.1 BACKGROUND

Pigs provide food, income, and an asset that is often utilized to reduce the negative effects of unexpected shocks and need for school fees (Kahan, 2013). The production of pigs in Uganda is characterized by quick turn-over, which makes the enterprise appropriate for smallholder farmers, who tend to operate using small short-term loans (Athanasiadou et al., 2007). Pig keeping in Uganda can also be categorized based on the three basic production systems like intensive, semi-intensive and extensive system (WHO, 2015). In Uganda, it is only pig meat among other types of livestock meat products that is registering a steady increase in the level of per capita consumption (Kabirizi & Zziwa, 2014). This trend was very pronounced in Uganda; where, the pork production increased tenfold within the same period (Nissen et al., 2011). Pig production provides a good potential for high economic gain for the farmer given factors like high feed conversion efficiency, high fecundity and short generation intervals (, 2017).

Livestock production and productivity is impeded by various constraints chief among them being persistent disease outbreaks (Nantima et al., 2015). Infections by gastrointestinal nematodes remain the most common and a major constraint to economic productivity of grazing livestock throughout the world (Velde et al., 2018).

Nematodes and other parasites are therefore an important limiting factor to smallholder livestock production in most low-income countries (Perry et al. 2002) and are indeed perceived as such among smallholder farmers (Kagira et al. 2010). The range of gastrointestinal nematodes species in pigs in the tropics includes *Oesophagostomum spp.*, *Ascaris suum*, *Trichuris suis*, *Hyostrogylus rubidus*, *Ascarops strongylina* and *Physocephalus sexalatus* (Nissen et al., 2011). These parasitic worms may lead to a reduction in weight gain, decreased supplies of milk and quality pork, increased mortality, as well as increased costs associated with anthelmintic treatments and other control measures, thereby causing significant annual economic losses (Rashid et al., 2022). The annual economic loss resulting from the increased cost of controlling parasitic nematodes using anthelmintic drugs is estimated at billions of dollars worldwide. Schafer, (2016)) found that nematode parasites in pigs inflict the greatest cost to the livestock industry compared with ectoparasites (lice, ticks, and flies).

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