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**MEDICINAL PLANTS USED IN MANAGEMENT OF POULTRY DISEASES AMONG  
RURAL POULTRY FARMERS IN YABIAVOKO PARISH, ARUA DISTRICT**

**BY**

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**A RESEARCH DISSERTATION SUBMITTED TO THE FACULTY OF  
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REQUIREMENTS FOR AWARD OF BACHELORS DEGREE OF ANIMAL  
PRODUCTION AND MANAGEMENT OF BUSITEMA UNIVERSITY**

**AUGUST, 2018**

## DECLARATION

I, **Acidri Geoffrey**, declare that this dissertation is original and has never been submitted or presented to any other university or Academic institution for purposes of getting an academic award. All the information in this dissertation is based on my observations and field findings.

Signature: .....  ..... Date: ..... 17/08/2018 .....



## APPROVAL

This dissertation has been supervised and submitted with the approval of my supervisor

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## DEDICATION

This research work is dedicated to my parents, Mr. Anguyo k.o Joseph and Mrs. Mbale Annet, and my friends Jeremy, Bonifance, Kevin, and Olivia Norah for always being helpful and finally my beloved brother Aoro Stephen for his guidance and encouragement towards my studies.

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## LIST OF ABBREVIATIONS

- FAO:** Food and Agriculture organization of the United Nations
- FGW:** Field guided walks
- KII:** Key Informant Interviews
- KIMD:** Key Informant Meeting Discussions
- UBOS:** Uganda Bureau of Statistics
- USAID:** United States Agency for International Development
- WHO:** World Health Organization
- WWF:** World Wide Fund for Nature
- NCD:** Newcastle Disease
- SDGs:** Sustainable Development Goals
- SPSS:** Statistical Software for Social Scientists
- MAAIF:** Ministry of Agriculture, Animal industry and Fisheries
- NARO:** National Agricultural Research Organization.
- NEMA:** National Environment Management Authority
- Km:** Kilometers

## ABSTRACT

This study was conducted to document medicinal plants used in management of poultry diseases among rural poultry farmers in Yabiavoko parish, Arua district, with a general objective of identifying and documenting the medicinal plants used in treatment and control of various poultry diseases. A total of 223 poultry farmers were purposively selected for the study in Yabiavoko and the data was collected using a semi-structured questionnaire, observation guide, key informant interviews and field guided walk from May to June 2018. Voucher specimens that were used to treat and control poultry diseases were collected, and botanically identified. A total of 27 medicinal plant species belonging to 24 families were identified and documented. Medicinal plants' families of the 24 families were Solanaceae (16.6%), Meliaceae (8.3%), Asteraceae (8.3%), Anacardiaceae (8.3%) and the rest of the families taking up 4.1 percent of the plants. The major factors that limit use of medicinal plants were; seasonal availability of the plants (29.0%), deforestation (24.7%), emergency of modern veterinary drugs (0.8%), wild fires (16.5%), Retainment of knowledge by some farmers, rareness of some plants (6.3 %), low efficacy (1.5 %), inadequate documentation (0.4%), over exploitation (2.7%), poor conservation strategies (2.0%) and Climate change (2.7%). The major preparation methods for medicinal remedies were; Cold extraction (71.3%), powder extract (10.7%), concoction (5.4%), decoction (5.4%) and others (7.2%). Many medicinal plants have not been documented in Arua district, therefore documentation of these plants with their indigenous knowledge is highly needed before their extinction due to over exploitation. Further scientific research is paramount, to test efficacy of these medicinal plants.

## CHAPTER ONE

### INTRODUCTION

#### 1.0 Background

Medicinal plants include various types of plants used in herbalism and some of these plants have medicinal activities. These medicinal plants contain a rich resources of ingredients which can be used in drug development and synthesis (Acta, *et al.*, 2012). More than 3.3 billion people in the less developed countries utilize medicinal plants on a regular basis for the control of various diseases in both animals and humans for several years (Singh, 2015). Application of these medicinal plants as a source of drugs in treating human and animal diseases has been a traditional practice (Báskaralingam, 2015).

Many studies in different ethnicities in several countries have revealed that resource poor poultry farmers such as China (Shen, *et al.*, 2010), India (Bauri, *et al.*, 2015), Pakistan (Raziq *et al.*, 2012), Iran (Ahvazi, *et al.*, 2012) have used medicinal plants for alleviating poultry diseases, ectoparasites and other livestock diseases. Most of the medicinal plants collected are not cultivated and face a risk of getting depleted or threatened with extinction through habitat destruction and over exploitation (Nanukobe *et al.*, 2011).

Rural poultry farmers such as in Nigeria (Ayeni & Basiri, 2018), Botswana (Moreki, Nelson, & Boitumelo, 2016), Zimbabwe (Marandure, 2016), Kenya (Okitoi, *et al.*, 2007), Namibia (Chinsembu, *et al.*, 2014), Ethiopia (Yigezu, *et al.*, 2014) and South Africa (Luseba & Tshisikhawe, 2013) have revealed the use of medicinal plants for managing poultry diseases and ectoparasites as well as other livestock diseases. According to Guéye\* & Guéye, (1999), infectious diseases seriously affect village poultry production in Africa and therefore constitute one of its major threats, however these diseases have been effectively managed using medicinal plants

In Uganda, different studies have been undertaken to document the use of medicinal plants in the management of poultry diseases. Studies by (Lagu & Kayanja, 2010; Nalubega, *et al.*, 2012) have identified medicinal plants in some ethnicities in Uganda. Despite all the wide spread use of medicinal plants, very little of the medicinal plant used in the management of poultry diseases is known to be documented in Arua district and, yet the traditional knowledge on the medicinal plants continues to be passed orally to subsequent generations in many communities (Mathias & McCorkle, 2004). The custodians of traditional knowledge are mainly the uneducated that still

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