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DETERMINING THE PREVALENCE AND ASSESSING FARMERS' KNOWLEDGE ON IDENTIFICATION, TRANSMISSION AND CONTROL OF BANANA BACTERIAL WILT DISEASE IN BUSHIKA SUB COUNTY BUDUDA DISTRICT

BY

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DECLARATION

I Matselele Emmanuel do here by declare that the research is my original work and has not been presented in any institution of higher learning for the award of the degree or any other qualification.

Signature.....

Date.....16th/01/2023.....

APPROVAL

This dissertation has been submitted to Busitema University as a requirement for the partial fulfilment of the award of the Bachelors of Science Education with approval as University supervisor.

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DEDICATION

This research work is dedicated to my beloved parents Mr Robert Walekula and Mrs Nandutu Aidah that have stood with me by supporting me in various ways to come up with this research work. May the good Lord bless you abundantly and grant you more years.

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ACRONYMS USED IN THE TEXT

BBW: Banana Bacterial Wilt disease

XCM*: Xanthomonas campestris pv.musacearum*

BXW: Banana Xanthomonas Wilt

EAHB: East African Highland Bananas

NAADS: National Agricultural Advisory Services

NARO: National Agricultural Research Organisation

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ABSTRACT

Xanthomonas wilt is a major constraint to banana production in the East and Central Africa. The disease can cause up to 100% yield losses if proper management strategies are not well implemented. Understanding of the disease status in terms of its prevalence, driving factors and farmers' knowledge provides insights towards a sustainable management approach. The fact that the highest percentage of farmers in Uganda specifically Eastern Uganda are banana growers, there was need to investigate about the disease status and farmers' knowledge about it because the disease has adversely affected banana production in the area. This study was therefore initiated to assess farmers' knowledge on the identification, spread and control strategies of the disease. Three parishes of Bunabutiti, Bubungi and Bungoro were sampled purposively. Out of the three parishes, a total of thirty farmers were sampled taking ten farmers from each parish. In this research, both primary and secondary data sources comprising of qualitative and quantitative data types were utilised. The data was collected by use of questionnaires which involved interviewing the selected farmers. The data was then presented, analysed and discussed. The results of the study indicated that at least all the farmers sampled acquired some level of education hence there were no illiterates. There were more male farmers with a percentage of 67 and females 33.Also the majority of the farmers were married with a percentage of 80.Many of the farmers practice farming on less than an acre of land and the majority are commercial banana growers. The study also indicated that who had more knowledge on identification of the disease correspondingly had more knowledge on the control strategies of the disease and had few cases of the cases. Farmers from so remote areas like Bungoro were more ignorant about the disease yet had most of the cases of the disease. The study therefore recommended sensitisation programs about the disease to go deep and reach the very remote areas of the district so as to sensitise our farmers about the disease identification, spread and effective control strategies. It was also concluded that to effectively control the disease, all the control measures or strategies must be taken as a set and implemented collectively without fail.

1.0 CHAPTER ONE: INTRODUCTION

1.1 Back Ground

Bananas are the fourth important global food commodity cultivated over 100 million hectares with annual production of 88 million tonnes (Buddenhagen et al., 1962)).In Africa, bananas provide more than 25% of food energy requirements for about 70 million people of whom 20 million are from East Africa alone.(Buddenhagen et al.,1962)).Uganda ranks second after India in the world in banana production with annual production output of 9.84 million tonnes accounting for 11.18% of the world's total production. Despite its importance, the crop is threatened by various production constraints among which includes banana bacterial wilt disease (locally called kiwotoka) caused by ***Xanthomonas campestrus pv.musacearum*** (Buddenhagen et al., 1962). Currently the disease has spread to most of the areas in Uganda including Bududa and its subunits. In 2001, a banana bacterial wilt disease caused by ***Xanthomonas campestris pv musacearum***, reported as a new threat to the banana especially in Mukono and Kayunga districts (Harrison et al., 1980).Worldwide the disease was first reported in Ethiopia on Enset cultivars (Ensete ventricosum), a relative of banana in 1968(Karamura et al., 2006).It was later reported on bananas in various parts of Ethiopia with incidence of between 70% to 80%.

Globally, bacterial wilt diseases of bananas are considered less important than Sigatoka and Fusarium wilt disease as evidenced by absence of an international working bacterial wilts of banana in the PROMUSA programme of International Network for Improvement of banana (Liu et al., 2002). However, the banana wilt in Uganda has overtaken the other banana diseases in importance largely because most farmers are not yet sensitized about measures for its effective control (Ngambeki et al., 2006)

Various surveys conducted since 2001 indicated that in all the affected districts, all banana types were affected. The disease was spreading rapidly in Mukono and Mbale Districts and it covered 10 villages in one year from the banana field where it was first seen in October 2000 and 18 villages by July 2002 despite efforts to curb it (Prior et al., 1998).

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