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PARSITIC INFECTIONS ON VEGETABLES IN THE HIGHLAND AND LOWLAND AREAS OF KWEEN DISTRICT

BY

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DECLARATION

I Kanyinyi Douglas Moi, Reg. No. BU/UP/2019/1498, hereby declare that this research project report as my original work, and has never been submitted to any board of examiners for award of degree in Bachelor of Science and education or any other kind of qualification.

Signature ..... Date 8/06/2023

KANYINYI DOUGLAS MOI

APPROVAL

This research project Report has been submitted with approval of my supervisor.

Signature.....Date.....08/06/2023.....

MADAM FLAVIA NATUKUNDA

DEDICATION

I dedicate this research my lovely father Maigut Christopher Moi, my mother, Chelimo Justine my sisters, brothers and to all my classmates of biology, Nagongera campus, Busitema University

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ABSTRACT

Vegetables and fruits are commonly consumed because of their nutritive value. However, studies have been carried out and it has showed that vegetables are one of the causes of intestinal parasites. These intestinal parasites are as a result of consumption of raw vegetables that have been affected. This study is aimed at assessing the parasitic contamination of vegetables from farm in both the highland and lowland areas of Kween district. Systematic Random sampling of vegetables in farm from two parishes was done, one from the lowland and one from the highland, Vegetables were collected from four villages in the highland and four villages from the lowlands of kween district. Simple random sampling method was used where by subsets was randomly selected from the population. In the method each member of the population has an equal chance of being selected, the study was carried out between November and February. The samples were taken to the laboratory at Busitema University for detection of parasites. A total of 160 samples that were collected and tested showed that 116 of the totals were affected by parasites and 44 were not affected. This gives the overall percentage of 72.5% that are affected which is very high. The lowland areas of kween district showed a high percentage in the parasitic infections than the highlands. Parasites that have a negative impact on human health. These findings will have important implications on public health that for example may aid regulatory agencies for prevention and control strategies for food safe.

CHAPTER ONE: INTRODUCTION

1.1 Background

Vegetables are an extremely important component of our daily diet as well as a high value cash crop for small and large growers alike. Vegetables, especially the leafy vegetables, are rich in protein, vitamins, minerals, fiber and many bioactive compounds. Especially potent are dark green leafy vegetables like cabbage, kale, spinach and lettuce varieties. Leaf vegetables, for example, are a major source of protein in the humid tropics. Mass transportation and modern processing has made many of these often highly perishable foods - which were previously only available on a seasonable basis in local markets or in restricted growing regions - more readily available both nationally and internationally. Many vegetables that were once only of local or regional importance are now standard produce on markets throughout the world.(Netscher and Sikora 1990). In most areas of the world vegetable consumption and production is expanding rapidly. This is especially evident in countries with rapidly expanding populations, where large amounts of land near urban centers have been devoted to vegetable production. Large scale vegetable production has been further stimulated by advances made in the processing industry. The rapid development of vegetable production in the tropics is illustrated by an 18% increase in production between 1981 and 1985. Conversely, in the more developed countries, vegetable production only expanded 7.7% in the same time span (Netscher and Sikora 1990). Production figures for some typical subtropical and tropical vegetable crops. However, there have been reports showing contamination of vegetables with parasites (Netscher, C.1990). Recently there has been an increase in the number of reported cases of foodborne illnesses linked to consuming fresh fruits and vegetables, especially in developing countries, the consumption of raw fruits plays a major epidemiological role in the transmission of food borne diseases (Hedberg, MacDonald et al. 1994). Protozoan infections in humans have been associated with consumption of raw vegetables(Heidar Nejadi 2021)(. (Jiménez, Drechsel et al. 2009). Climate plays a fundamental role in determining the conditions for parasite. In particular, pathogens and those with free-living infective stages are highly dependent upon local temperature and humidity conditions to complete their life cycles.(Dobson, Kutz et al. 2003).

There is a high possibility that Vegetables that are grown close to the soil substrate may be contaminated by various food borne pathogens. (Burnett and Beuchat 2000). Given the increased

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