CASSAVA PRODUCTION IMPROVEMENT THROUGH STAGGERED PLANTING FOR INDUSTRIAL PROCESSING AND UTILIZATION IN EASTERN AND SOUTHERN ZONES OF TANZANIA

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A DISSERTATION SUBMMITED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER IN CROP SCIENCE OF SOKOINE UNIVERSITY OF AGRICULTURE

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ABSTRACT

An experiment was conducted with the aim of identifying suitable cassava scheduled planting, harvesting and varietal performance in order to optimize growth, development, yield and quality of cassava during the 2017/18 - 2018/19 cropping season. The experiment was conducted at Naliendele, Nachingwea and Ilonga TARI Research Centres in Tanzania. The experiment was laid out as split-split plot in a randomized complete block design with variety being main factor, harvesting time as sub plot and planting schedules as sub-sub plot with four replications at each site.Factor A with three levels which were *Kiroba, Mkuranga* 1 and *Chereko* variety. The sub plot also with three levels that were harvesting at eight, ten and 12 months after planting while factor C also with three levels of planting times in November/December, January and March/April. The total root yield increased significantly from first to third planting and harvesting times respectively. *Kiroba* variety planted in November/December and then harvested at twelve months after planting (MAP) gave highest total fresh root yield 27 tones per hactre (t/ha) in the Southern zone followed by Eastern zone with *Kiroba* variety planted in November/December and March/April yielded highest total root (22t/ha) when harvested at 12MAP. Based on cassava dry matter content; the study shows that: highest dry matter content was obtained when *Mkuranga* 1 variety planted in November/December and harvested at 12MAP gave 40% followed by *Kiroba* variety planted in November/December and harvested after 12MAP had 39% in Southern zone. Also the study found that; cassava starch content was highest (23%) in Southern zone when *Mkuranga* 1 variety planted during November/December and harvested at 12MAP before the onset of rainfall. The current results recommend that practising planting cassava in November/December for fresh cassava utilization and adopt the late planting in March/April can be advantageous in small scale and commercial producers.

Keywords: Cassava; Scheduled, Staggered, harvesting, planting time; Cassava starch and dry matter contents, yields and yield components.

DECLARATION

I, Festo Frank Masisila do hereby declare to the Senate of the Sokoine University of Agriculture that; this dissertation is my own original work done within the period of my registration and has not been submitted in any other institution.

_____ _____

Festo Frank Masisila **Date**

(MSc. Candidate)

The above declaration is confirmed

_____ _____

Prof. C. L. Rweyemamu **Date**

(Supervisor)

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DEDICATION

I dedicate this work to God The Highest and to everyone who believes in His Word

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF PLATES

LIST OF APPENDIX