FACULTY OF ENGINEERING

DEPARTMENT OF AGRICULTURAL MECHANIZATION AND IRRIGATION ENGINEERING

INVESTIGATING THE EFFECT OF BIOCHAR ON SOIL MOISTURE RETENTION, CROP GROWTH AND YIELD OF KALE

BY

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ABSTRACT

Biochar is an amendment that can be used for enhancing soil water storage which may increase crop productivity. The objective of this study was to investigate the effects of biochar on growth, yield and root development of kale under Drip irrigation. From early stage to maturity stages, the plants were subjected to 100g, 150g and 200g biochar and compared with the control. The experiment was conducted for 8 months under completely randomized design with four treatment and two replications in a greenhouse environment. Among the treatments, Biochar with 100g, 200g conserved 15%, 14% respectively under irrigation with 100% water crop requirement. More Sukuma wiki plant growth and yield were observed to be significantly different from the control making Biochar the best soil and water conservation agronomic measure.

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DECLARATION

I Wambogo Emmanuel declare that this final year project report is of my research.

This work has not been presented in this or any other university for the award of a degree.

Name…….

Signature …….

Date…….

APPROVAL

This final year project report has been submitted to the department of Agricultural mechanization and irrigation Engineering of Busitema University with approval of the following University Supervisors

Mr. Bwire Denis

Signature…….

Date…….

DEDICATION

This final year project report is dedicated to my family members and relatives most especially my parents Mr. Wekwanya Wilson and Mrs. Wekwanya Allen for their love, care, guidance, encouragement and financial support rendered to me up to this academic level. May the good lord bless you always

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