

# TABLES OF CONTENTS

Title	Page No.
<i>Abstract</i>	i-iii
<i>Declaration by the Candidate</i>	iv
<i>Certificate of Supervisor</i>	v
<i>Certificate of Co-Supervisor</i>	vi
<i>Acknowledgements</i>	vii-viii
<i>Table of Contents</i>	ix-x
<i>List of Tables</i>	xi-xii
<i>List of Figures</i>	xiii-xiv
<i>List of Images</i>	xv
<i>Abbreviations</i>	xvi-xvii
<b><i>CHAPTER 1: INTRODUCTION</i></b>	1-10
<b><i>CHAPTER 2: REVIEW OF LITERATURE</i></b>	1-41
2.1. Biochar characteristics influenced by feedstocks	1-4
2.2. Biochar characteristics influenced by production methods	4-7
2.3. Use of biochar as soil amendment	8-9
2.4. Use of biochar as a growth promoter for soil biota	9-11
2.5. Influence of biochar on plant growth	11-13
2.6. Use of biochar in environmental remediation	13-14
2.7. Biochar on mitigation of greenhouse gas emission	14-17
<b><i>CHAPTER 3: MATERIALS AND METHODS</i></b>	1- 35
3.1. Production of biochars	1-2
3.2. Characterization of biochars	2-8
3.3. Experiment on seed germination performance	9-11
3.4. Field experiment	11-17
3.5. Gas sampling from the fields	18-20
3.6. Sampling for plant parameters	20-21

3.7. Soil sampling and analysis	21-30
3.8. Statistical analysis	30-31
<b><i>CHAPTER 4: RESULTS</i></b>	1-70
4.1. Objective 1	1-9
4.2. Objective 2	10-54
4.3. Objective 3	55-69
<b><i>CHAPTER 5: DISCUSSION AND SALIENT FINDINGS</i></b>	1-17
<b><i>CHAPTER 6: CONCLUSION AND FUTURE PROSPECTS</i></b>	1-3
<b><i>LIST OF PUBLICATIONS AND PAPERS PRESENTED IN SEMINAR, CONFERENCE, SYMPOSIUM AND ANNUAL CONGRESS</i></b>	a