

**EFFECT OF POTASSIUM AND ORGANIC MANURES ON THE
GROWTH PERFORMANCE OF COWPEA (*Vigna unguiculata*) IN
SANDY REGOSOLS**



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ABSTRACT

In Sri Lanka due to the continuous change in climate drought is becoming as a serious problem in Agriculture. Batticaloa district is one of the intensive agricultural region in Sri Lanka and mostly affected by drought during yala season. Major soil group found in this region is sandy regosols and it is low in agricultural value. Therefore proper management practices should be adopted to improve the agricultural productivity.

Soil moisture is the principal environmental factor that limiting the legumes productivity in tropical countries. Potassium fertilization facilitates the crops to survive under drought stress and helps to obtain better performance.

A pot experiment was carried out at Eastern University, Sri Lanka during the period of July to September 2018, to evaluate the effect of organic manures and rate of potassium on the growth performance of cowpea (*Vigna unguiculata*) in sandy regosol using variety wijaya. There were eight treatments combining cow dung and compost with muriate of potash at the rate of 100%, 125%, 150% and 175% of recommendation replicated at three times in two factor factorial completely randomized design (CRD).

Among the organic manures compost showed highest growth performance than cow dung. Increasing rate of potassium increased the potassium uptake. Highest yield was obtained at the combination of compost with 175% recommendation of MOP. So combination of compost with increasing rate of MOP can be suggested to farmers especially for the cultivation of cowpea on sandy regosols in order to obtain the best growth performance and yield and indirectly avoid excess watering during drought condition.

Key words- Compost, cowpea, cow dung, MOP, organic manure, potassium and sandy regosol

TABLE OF CONTENTS

Content	Page no
ABSTRACT.....	i
ACKNOWLEDGEMENT.....	iii
TABLE OF CONTENTS.....	iv
LIST OF TABLES.....	ix
LIST OF FIGURES.....	x
ABBREVIATIONS.....	xi
CHAPTER 01	1
1.0 INTRODUCTION.....	1
OBJECTIVES	5
CHAPTER 02	6
2.0. LITERATURE REVIEW.....	6
2.1. Sandy regosol.....	6
2.1:1 Problems of cultivation on sandy regosols.....	6
2.1.1.1 Moisture retention problems.....	6
2.1.1.2 Nutrition retention.....	7
2.2. Role of Potassium in Agriculture.....	8
2.2.1. Potassium and Biotic stress resistance.....	10
2.2.2. Potassium and drought resistance.....	11

2.2.3. Functions of Potassium	12
2.2.4. Potassium deficiency symptoms.....	16
2.3. Cowpea.....	17
2.3.1. Widely used cowpea cultivars in Sri Lanka.....	17
2.4. Climate change in Sri Lanka.....	17
2.4.1. Drought	18
2.5. Water stress and plant growth.....	19
2.6. Effect of soil moisture on cowpea.....	19
2.7. Sources of Potassium.....	20
2.7.1. Muriate of potash (Potassium chloride).....	20
2.8. Organic manures.....	20
2.8.1. Compost.....	20
2.8.1.1. Compost application forms.....	21
2.8.2. Cow dung.....	22
2.8.3. Effect of organic manures on soil properties.....	23
2.8.3.1. Physical properties.....	24
2.8.3.2. Chemical properties.....	24
2.8.3.2.1. Soil pH.....	25
2.8.3.2.2. Soil electrical conductivity	25
2.8.3.2.3. Soil fertility	25

2.8.2.3. Biological properties.....	26
2.8.3. Organic manure as a source of macro and micronutrients.....	26
2.8.4. Plant growth and yield.....	26
CHAPTER 03	28
MATERIALS AND METHODS.....	28
3.1 Description of experimental site.....	28
3.2 Properties of organic manures and soil samples.....	28
3.2.1 Manures	28
3.2.2 Soil sample.....	29
3.3 Experimental design and preparation of treatments.....	30
3.3.1 Experiment.....	30
3.3.2 Treatment.....	31
3.3.3 Experimental design.....	32
3.3.4 Experimental layout.....	32
3.3.5 Pot culture experiment.....	33
3.4 Collection of seeds.....	33
3.5 Agronomic practices.....	33
3.5.1 Planting and spacing.....	33
3.5.2 Water management.....	33
3.5.3 Fertilizer management.....	34

3.5.4 Weed management.....	35
3.6 Sample analysis.....	35
3.6.1 Plant sample.....	35
3.6.1.1 Biometric parameters	35
3.6.1.2 Plant nutrient analysis	35
3.6.2 Soil sample.....	35
3.7 Statistical analysis	36
CHAPTER 04	37
RESULTS AND DISCUSSION.....	37
4.1. Plant height.....	37
4.2. Leaf area.....	40
4.3. Leaf dry weight.....	42
4.4. Shoot dry weight.....	44
4.5. Root length.....	46
4.6. Root dry weight.....	48
4.7 Potassium content in soil and plant at the time of harvesting.....	50
4.8 Pod number per plant.....	52
4.9 Yield.....	54
CHAPTER 05.....	57
SALIENT FINDINGS AND CONCLUSIONS.....	57