

**GROWTH AND YIELD PERFORMANCE OF RADISH
(*Raphanus sativus L.*) FERTILIZED WITH BIOFERTILIZER**



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ABSTRACT

The study was conducted to evaluate effectiveness of Bio fertilizer and combined inorganic fertilizer on growth and yield of radish. The experiment was carried out during December to March 2025 at the Faculty of Technology, Eastern University, Sri Lanka. The study was designed with five treatment and ten replicates. Treatments are T₁-(Control); Recommended amount of chemical fertilizer by Department of Agriculture (RDOA), T₂- 1/2 RDOA of urea +Recommended amount of Triple super phosphate and Muriate of potash +250ml/ha Bio fertilizer, T₃ - 1/2 RDOA of urea + TSP&MOP + 500ml/ha Bio fertilizer, T₄- 1/2 RDOA of urea + TSP & MOP + 750ml/ha Bio fertilizer, T₅- 1l/ha Bio fertilizer alone. All other agronomic practices were followed based on DOA recommendation. Plant height, number of leaves, leaf area were measured in weekly interval. Fresh weight of leaf cutting, dry weight of leaf cutting, tuber length, tuber diameter, fresh weight and dry weight of tuber were measured at the time of harvesting (6th Week after planting). Analysis of variance was performed to determine significant difference among treatment ($p<0.05$).The results revealed that treatments combining inorganic fertilizers with biofertilizers (T₃ and T₄) significantly enhanced plant growth and tuber yield compared to inorganic fertilizers alone (T₁) as well as biofertilizers alone (T₅). The highest tuber yield was observed in T₄, demonstrating the effectiveness of biofertilizers in improving nutrient uptake, root elongation, and soil microbial activity. These findings suggest that integrating biofertilizers with inorganic fertilizers can enhance radish productivity while reducing the environmental impact of excessive chemical fertilizer use. The study highlights the potential of biofertilizers as a sustainable approach to improving soil fertility and crop yield.

Key words: Bio fertilizer, Chemical fertilizer, Radish

TABLE OF CONTENT

ACKNOWLEDGEMENT	iv
ABSTRACT.....	v
TABLE OF CONTENT	vi
LIST OF TABLE	x
LIST OF FIGURES	xi
ABBREVIATION AND SYMBOLS	xii
CHAPTER 01	1
1.0 INTRODUCTION.....	1
1.1 Background of the study	1
1.2 Objectives of the study	4
CHAPTER 02	5
2.0 LITERATURE REVIEW.....	5
2.1 Radish (<i>Raphanus sativus</i> L.)	5
2.1.1 History and origin of radish	5
2.1.2 Taxonomy of radish	6
2.1.3 Botanical description of radish	6
2.1.4 Climate, soil, and growth requirements for radish.....	6
2.1.5 Nutritional and chemical composition	7
2.1.6 Use of radish	9
2.1.7 Recommended variety of radish in Sri Lanka.....	9
2.2 Fertilizers	10
2.2.1 Inorganic fertilizer	10
2.2.1.2 Effect of nitrogen fertilizer on plant.....	11
2.2.2 Organic fertilizer	11
2.2.2.1 Bio fertilizer	12

2.2.2.2 Advantage of bio fertilizer	12
2.2.2.3 Types of Bio fertilizers.....	13
2.2.2.4 Biofilm bio fertilizer.....	14
2.3 Growth and Yield Parameters in Radish	14
2.3.1 Key metrics for evaluating radish performance.....	14
2.3.2 Influence of biofertilizers on physiological traits	15
2.4 Biofertilizers in Radish Cultivation.....	15
2.4.1 Existing research on bio fertilizer use in radish production.	15
2.4.2 Impact of microbial inoculants on root development, biomass, and yield	16
2.5 Mechanisms of Biofilm Bio fertilizer in Enhancing Radish Performance	17
2.5.1 Nutrient availability (N, P, K) and uptake efficiency.	17
2.5.2 Role of plant growth-promoting rhizobacteria (PGPR) in root elongation and stress tolerance.	18
2.5.3 Synergistic Effects of Biofilm with Soil Microbiota	18
2.6 Aspect of Sri Lanka's Fertilizer Situation	19
2.7 Bio fertilizer as a sustainable alternative	20
2.8 Benefits of the combination of organic and inorganic fertilizer.....	21
2.9 Importance of Sustainable Agriculture	22
CHAPTER 03	24
3.0 MATERIAL AND METHODOLOGY	24
3.1 Experiment location.....	24
3.2 Climate and soil	24
3.3 Variety used.....	24
3.4 Experiment.....	24
3.4.1 Experimental Design.....	24
3.4.2 Treatment used in this experiment.....	26
3.5 Agronomic practices.....	26

3.5.1 Preparation of pots	26
3.5.2 Seeding.....	26
3.5.3 Irrigation	26
3.5.4 Fertilizer application	27
3.5.4.1 Application of Biofilm Bio fertilizer.....	27
3.5.4 Thinning.....	27
3.5.5 Weeding.....	27
3.5.6 Pest and disease management	28
3.6 Measurements.....	28
3.6.1. Growth & yield parameters.....	28
3.6.1.1 Plant height (cm)	28
3.6.1.2 Number of leaves	28
3.6.1.3 Leaf area	28
3.6.1.4 Fresh weight of the leaf cutting.....	29
3.6.1.5 Dry weight of the leaf cutting	29
3.6.1.6 Tuber length (cm).....	29
3.6.1.7 Fresh weight of tuber (g).....	29
3.6.1.8 Dry weight of tuber (g).....	29
3.7 Analysis of data	30
CHAPTER 04	31
4.0 RESULTS AND DISCUSSION	31
4.1 Growth parameters	31
4.1.1 Plant height	31
4.1.2 Number of leaves per plant.....	32
4.1.3 Leaf area (cm ²).....	33
4.2 Yield parameters.....	34
4.2.1 Fresh and oven dry weight (g) of plant.....	34

4.2.2 Fresh and oven dry weight (g) of tuber.....	35
4.2.3 Tuber length and diameter	36
CHAPTER 05	38
5.0 CONCLUSION	38
REFERENCES	39