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

By

K. Pooya

Department of Biosystems Technology

Faculty of Technology

Eastern University, Sri Lanka

2025

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 T_1-(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 (6^{th} 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 (T_3 and T_4) significantly enhanced plant growth and tuber yield compared to inorganic fertilizers alone (T_1) as well as biofertilizers alone (T_5). The highest tuber yield was observed in T_4, 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