EFFECT OF FOLIAR APPLICATION OF NATURAL FERTILIZERS ON GROWTH AND YIELD OF OKRA

(*Abelmoschus esculentus* L.)

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ABSTRACT

This experiment evaluates the effect of foliar application of banana and orange peel sap combine with inorganic fertilizer on growth and yield of okra. The study was carried out from March 2024 to June 2024 at the Faculty of Technology, Eastern University, Sri Lanka. The study design is CRD with five treatments and four replicates in this experiment. Treatments are T_1 (Control) - The recommended amount of inorganic fertilizer by the Department of Agriculture (RDOA), T_2- 2/3 amount of RDOA and application of organic liquid fertilizer 2 times, T_3- 2/3 amount of RDOA and application of organic liquid fertilizer 3 times, T_4-2/3 amount of RDOA and application of organic liquid fertilizer 4 times, T_5- application of organic liquid fertilizer 4 times. The parameters such as number of leaves per plant, plant height, and leaf area were measured at two-week intervals. Number of flowers per plant was obtained at 4th week after planting. Number of pods per plant and yield per plant were obtained at the time harvesting. Analysis of variance was performed to determine significant differences among treatments. According to the analysis of this study, the highest average values for the plant height, leaf area, number of pods per plant and yield per plant were observed in treatment T_4. Overall, the lowest average values for these parameters for observed in control treatment. According to the overall results of this study, it suggested that 4 times organic liquid fertilizer combined with 2/3 amount of inorganic fertilizer by RDOA provides better yield performance of okra. The application of organic liquid fertilizer made from banana and orange peels is a successful and sustainable approach for reducing inorganic fertilizer requirement as well as increasing crop growth and yield of okra.

Keywords: Fruit peel sap, folia application, Okra

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