EFFECTIVENESS OF THE LIQUID BIOFERTILIZER ON THE GROWTH PARAMETERS OF THE CHILLI PLANT

(*Capsicum annum)*

By

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ABSTRACT

This study was conducted to evaluate the efficiency of a liquid bio fertilizer (using goat manure, fish manure, banana peels, *Gliricidia*, ash, soil and water) on growth parameters of chili plant (Capsicum *annum*). The experiment was carried out during March 2024 to June 2024 at the Green Lanka Breeding center, Padukka. The study was designed with six treatments and for each treatment four replicates. Treatments are T1 – 10% of organic fertilizer, T2 – 30% of organic fertilizer, T3 – 50% of organic fertilizer, T4 – 100% of organic fertilizer, T5 – Control (without adding any fertilizer), T6 – Recommended inorganic fertilizer. All the agronomic practices were followed based on the recommendations. Plant height, Number of leaves per plant, Length of the leaf per plant, Number of branches, Number of pods were measured once a week after the fertilizer application. Analysis of Variance was performed to determine significant difference among treatments ($p< 0.05$).

Results showed that the measured parameters showed variations among the treatments but they were not significantly differed ($p> 0.05$). Therefore all the treatment levels were same as there is no significant difference. But the average plant height is higher in T2 where 30% of organic fertilizer used while the T4 has the lowest. Number of leaves per plant was higher in T3 while the lowest was obtained in T5. The mean length of the leaf per plant was higher in T2 while the lowest was shown in T4. T3 was shown the highest number of branches while T5 showed the lowest number of branches. The mean number of pods were high in T3 whereas T1 and T5 both were shown as lowest values.

Among all treatments, T2 and T3 consistently perform the best across multiple parameters including plant height, number of leaves, leaf length, number of branches, and number of pods. All the treatments are the most effective in promoting plant growth and development because there is no significant different.

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