**Effect of Biofertilizer on Growth and Yield of Tomato (*Solanum lycopersicum*) in Greenhouse Condition**

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Biofertilizers have a greater potential to enhance agriculture productivity as they are enriched with plant growth promoting microorganisms. Bionutri® is a newly introduced biofertilizer, recommended for horticultural crops. Hence, a pot trial was conducted to evaluate the impact of Bionutri® fertilizer on growth and yield of tomato under the greenhouse conditions, at Faculty of Agricultural Sciences, Sabaragamuwa University of Sri Lanka. The experiment was laid out in a Completely Randomized Design (CRD) with tri-replicates. Six treatments, T1- Bionutri® only, T2- DOA recommendation, T3- Organic (compost) only, T4- Bionutri® + Organic (compost), T5- DOA 50% + Bionutri® and T6 - DOA recommendation + Bionutri® were assessed and compared for plant height, number of leaves per plant, and days taken for flower bud initiation as growth parameters and total number of flowers per plant, total fruit yield per plant, and average fruit weight as yield parameters. One-way ANOVA and Kruskal–Wallis tests followed by planned parametric contrast and non-parametric comparisons by Mann-Whitney-Wilcoxon U test were done. The significantly (P<0.05) highest value for plant height (34.5±0.4 cm), number of flowers per plant (median 103; min (95) and max (105)), average fruit yield per plant (3.3 ±0.03 kg), and average fruit weight (98.5±1.25 g) were resulted with T6. Hence, this study concludes that foliar application of Bionutri® fertilizer with DOA recommendation has enhanced the plant growth and yield of tomato.

**Keywords:** *Bionutri®, chemical fertilizers, foliar application, sustainable agriculture*