

Productive Performance of Tomato (*Lycopersicon Esculentum* Mill.) Treated With Coir Pith Based Compost

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ABSTRACT. Tomato (*Lycopersicon esculentum* Mill.) is an important vegetable which serves as a cash crop for the farmers of Sri Lanka. Due to high temperature, poor availability of water and improper nutrient management, the production of tomato is below the potential level. Coir pith compost (CPC) has favorable properties to be used as organic manure. Hence a pot experiment was conducted during the 'yala' season at the department of Agricultural Biology of Eastern University Sri Lanka to study the effects of CPC on the productive performance of tomato. Five treatments with recommended inorganic fertilizers (T0); farmyard manure (FYM) (T1); CPC (T2); combination of FYM and inorganic fertilizers (T3); and combination of CPC and inorganic fertilizers (T4) were arranged in Complete Randomized Design with four replications. Performance of tomato was assessed in terms of plant height, number of leaves per plant, Leaf Area Index (LAI) and yield components such as number of fruits per plant, fruit size and fresh yield. The results revealed that the highest number of leaves and fruits per plant were recorded in T3. Mean fruit size and LAI were significantly ($P < 0.05$) higher in T4. Even though the highest yield was recorded in T4 it did not differ significantly ($P < 0.05$) with that of T3. It was noted that combined use of fertilizers either CPC and inorganic fertilizer or FYM and inorganic fertilizer has resulted in better yield (28% higher than control). Hence it could be concluded that coir pith compost can be used as an organic manure to improve the productivity of tomato cultivation.

Key words: Coir Pith Compost, Farm Yard Manure, Inorganic Fertilizer, Performance, Tomato.

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