EFFECT OF PINEAPPLE PEEL LIQUID FERTILIZER ON GROWTH AND YIELD OF RADISH (*Raphanus sativus* L.)

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ABSTRACT

The experiment was carried out during March 2024 to July 2024 at the Faculty of Technology, Eastern University, Sri Lanka to evaluate the effect of pineapple peels as a liquid organic fertilizer (LOF) on the growth and yield of radish (*Raphanus sativus* L). The different percentages of LOF as treatments were applied to soil after two weeks of planting of radish seeds. Treatments included T1 as a control [recommended NPK inorganic fertilizers (RIF) - full dosage], T2 (RIF - half dosage + 20% LOF), T3 (RIF - half dosage + 40% LOF), T4 (RIF - half dosage + 60% LOF), T5 (RIF - half dosage + 80% LOF) and T6 (RIF - half dosage + 100% LOF). These treatments were arranged in randomised complete design (RCD) along with six replications. The results revealed the treatment T4 had surpassed all other treatments by achieving the maximum plant heights, which amounted to 30.98 cm. Though far less successful than T4, T3 and T5 also shown significant development. Less rapid development and reduced heights were seen in T1, T2, and T6. Over the duration of the research, T3, T2, and T6 had the most leaves, while T3 displayed the next-highest number of leaves. Leaf area index (LAI), T4 had the greatest LAI values, which were particularly noticeable by the eighth week (116.98 cm^2), suggesting an improved rate of leaf growth. Weights of leaves and tuber, T4 produced the highest fresh weight (61.40 g) and dry weight (5.92 g) of leaves, and the highest fresh weight (104.07 g) and dry weight (5.92 g) of tubers. Whereas T1 and T6 had the lowest weights, T3 and T5 demonstrated moderate efficacy. Additionally, T4 had the largest tuber length and girth, indicating that it had a better effect on the growth of radish tubers. Productivity, T4 outperformed other treatments, producing the largest tuber weight (34.69 g). In terms of encouraging radish growth generally, T2, which had the lowest yield, showed less efficacy. It appears that T4 provides the most dependable and constant performance due to the large yield variability among treatments.

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