


**THE EFFECT OF VERMIWASH ON GROWTH AND YIELD OF
LETTUCE (*Lactuca sativa*)**



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ABSTRACT

Organic farming is a cultivation technique that excludes the use of synthetic pesticides, synthetic fertilizers, or synthetic substances. The study aimed to investigate the effect of vermiwash on the growth and yield of lettuce, which is an important crop in organic farming. Vermiwash is the liquid fertilizer produced from the vermicompost bin, which is rich in nutrients and beneficial for soil health.

Four different concentrations of vermiwash, T1(0%), T2 (20%), T3 (30%), T4 (40%) along with the control (T1) were applied to the lettuce plants, at the field of kuliypitiya. The experiment was laid out in a Randomized complete block design (RCBD) with twenty replicates. The results showed that the 30% and 40% concentrations of vermiwash had significant effects ($p < 0.05$) on the growth and yield of lettuce, compared to the control. The application of 30% and 40% of vermiwash significantly increased the plant height, the number of leaves, leaf area, leaf length, leaf width, fresh weight, dry weight, and root length ($p < 0.05$). The optimal concentration rate for lettuce cultivation was found to be 30% vermiwash, hence economical. These findings suggest that vermiwash concentration can be a useful tool and profitable for improving the quality and yield of lettuce in organic farming. This study provides important insights into the potential benefits of vermiwash for sustainable and eco-friendly agriculture practices.

Keywords: Vermiwash, Organic Farming, Lettuce, Sustainable Agriculture

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