

Effect of Different Fruit Peels on The Growth and Yield of Lettuce

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Abstract

Fruit peels are rich in essential plant nutrients. Nowadays, the demand for organic fertilizer was increased. Therefore, the experiment was conducted to determine the effect of banana and citrus fruit peel-based nutrition sources on the growth and yield of lettuce. The experiment was arranged in a Completely Randomized Design with nine treatments and four replicates separately for powder and liquid form. In powder form, T1 (Control) – Only ½ recommended compost, T2 – ½ recommended compost + 2g of fruit peel powder, T3- ½ recommended compost + 4g of fruit peel powder, T4 – ½ recommended compost + 6g of fruit peel powder, T5 – ½ recommended compost + 8g of fruit peel powder, T6 – Only 2g of fruit peel powder, T7 – Only 4g of fruit peel powder, T8 – Only 6g of fruit peel powder, T9 – Only 8g of fruit peel powder. In liquid form, T1 (Control) – Only ½ recommended compost, T2 – ½ recommended compost + C1 concentration (1 cup fruit peels + 1000 mL water) , T3 – ½ recommended compost + C2 concentration (2 cups fruit peels + 1000 mL water) , T4 – ½ recommended compost + C3 concentration (3 cups fruit peels + 1000 mL water), T5 – ½ recommended compost + C4 concentration (4 cups fruit peels + 1000 mL water) , T6 – Only C1 concentration, T7 – Only C2 concentration, T8 – Only C3 concentration, T9 – Only C4 concentration. Quantitative parameters were measured. Data were analyzed by using Minitab software. In powder form, T3 was shown high fresh weight (205.703 ± 0.949) and a high number of leaves (20.667 ± 0.577) among all other treatments. In liquid form, T2 was provided with high fresh weight (261.33 ± 2.74) and a high number of leaves (20.667 ± 1.155) among other all treatments. Therefore, the present study paved a way for finding the best amount of fruit peel powder and the best concentration of fruit peel tea for lettuce.

Keywords: Banana peels, Citrus fruit peels, Fruit peel fertilizer, Fruit peel powder

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