

**EFFECT OF BIOCHAR MADE KITCHEN WASTE
COMBINE WITH VERMICOMPOST ON THE
GROWTH OF TOMATO (*Solanum lycopersicum*)
PLANT**

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ABSTRACT

The pot experiment was carried out to study the effect of biochar-made kitchen waste combined with vermicompost on the growth of tomato (*Solanum lycopersicum*) plants.

This experiment was laid out in a Complete Randomized Design (CRD) with replicates having the following treatments: T₁- Control (1kg soil alone), T₂- 200g vermicompost, + 200g kitchen wastes biochar + Soil 600g, T₃- vermicompost 150g + 400g kitchen wastes biochar + Soil 450g, T₄- 100g vermicompost + 600g kitchen wastes biochar + Soil 300g, T₅- 50g vermicompost + 800g kitchen wastes biochar + Soil 150g.

The results showed that different rates of biochar, and vermicompost had significant effects on some tested parameters of tomato over the control. The results revealed that the application of 100g vermicompost and 600g biochar (T₄) had significant differences in plant height, the number of leaves and branches per plant, stem length, stem weight, root weight, and root length than other treatments.

Application of biochar mixed with vermicompost improves the growth of tomato plants in sandy regosol. The present study can be suggested that among the all tested treatments of biochar and vermicompost mix, the combination of 600g biochar and 100g vermicompost would be the suitable rate for optimum tomato plant growth.

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