

# **The Effects of Vermicompost and NPK Fertilizers on Growth and Yield of Common Bean**

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## **Abstract**

Vermicomposts are organic materials broken down by interactions between micro-organisms and earthworms in a mesophilic process to produce fully stabilized organic soil amendments with low C: N ratios. The objectives of this study were to investigate on the effects of using vermicompost on growth and yield of *Phaseolus vulgaris* and also to examine the effects of NPK and vermicompost in beans production and yield as sole amendments and as a combination of the two. The experimental design used was randomized complete block design with three replications. Experimental treatments were: T1: 100% recommended dose of NPK; T2: 100% recommended dose of vermicompost; T3: 50% vermicompost + 50% NPK; and T4: control (no application of either vermicompost or NPK). The size of the plot used was 8M by 5M. Data was collected on pod length, number of pods per bean plant and also the number of bean seeds in the bean pods. The data was subjected to analysis of variance (ANOVA) using SAS statistical software. Least significant difference at 5% was used to compare the treatment mean. This study found out that 100% vermicompost application improved growth parameters of common bean namely leaf area index, plant height, pod length, number of seeds and number of pods per plant as compared to chemical fertilizer application. This study recommends that the study be repeated for another season to confirm these results.