

Effect of Poultry Manure and Nitrogen, Phosphorus, and Potassium (15:15:15) Soil Amendment on Growth and Yield of Carrot (*Daucus carota*)

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Abstract : This present experiment was carried out during the 2012 cropping season, at the Farming for the Future Experimental Field of the University for Development Studies, Nyankpala Campus in the Northern Region of Ghana. The objective of the experiment was to determine the carrot growth and yield responses to poultry manure and N.P.K (15:15:15). Six treatments (Control (no amendment), 20 t/ha poultry manure (PM), 40 t/ha PM, 70 t/ha PM, 35 t/ha PM + 0.11t/ha N.P.K and 0.23 t/ha N.P.K) with three replications for each were laid in a Randomized Complete Block Design (RCBD). Data were collected on plant height, number of leaves per plant, canopy spread, root diameter, root weight, and root length. Microsoft Excel and Genstat Statistical Package (9th edition) were used for the data analysis. The treatment means were compared by using Least Significant Difference at 10%. Generally, the results showed that there were no significant differences ($P > 0.1$) among the treatments with respect to number of leaves per plant, root diameter, root weight, and root length. However, significant differences occurred among plant heights and canopy spreads. Plant height treated with 40 t/ha PM at the fourth week after planting and canopy spread at eight weeks after planting and ten weeks after planting by 70 t/ha PM and 20 t/ha PM respectively showed significant difference ($P < 0.1$). The study recommended that any of the amended treatments can be applied at their recommended rates to plots for carrot production, since there were no significant differences among the treatments.

Keywords : poultry manure, N.P.K., soil amendment, growth, yield, carrot

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