# VEGETATIVE GROWTH, DRY MATTER PRODUCTION AND SEED YIELD OF SOYBEAN (*GLYCINE MAX* L. MERRILL) IN RESPONSE TO POULTRY MANURE AND PHOSPHORUS FERTILIZATION

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## ABSTRACT

The objective of this study was to examine the effect of application of poultry manure and inorganic phosphorus fertilizer applied sole or in combination on the agronomic performance of soyabean. The trial was a single factor experiment consisting of six nutrient management options (30 $kgha^{-1}$ P, 10 $tha^{-1}$ poultry manure, 7.5 $kgha^{-1}$ P + 7.5 $tha^{-1}$ poultry manure, 22.5 $kgha^{-1}$ P + 2.5 $tha^{-1}$ poultry manure, 15 $kgha^{-1}$ P + 5 $tha^{-1}$ poultry manure and the unfertilized control). Phosphorus applied was in form of single super phosphate (SSP). The experiment was laid out in in a randomized complete block design (RCBD) using three replications. The nutrient treatments differed significantly ($P<0.05$) in plant height, number of branches and stem girth. Maximum plant height (37.33 cm), area per leaf (170.15 $cm^2$) leaf area per plant (11217.99 $cm^2$), highest number of nodules (35.33) and seed yield (1609.72 $kgha^{-1}$) were observed in mixed nutrient of 7.5 $kgha^{-1}$ P + 7.5 $tha^{-1}$ PM. The results indicated that mixture of phosphorus and poultry manure at the rate of 7.5 $kgha^{-1}$ P +7.5 $tha^{-1}$ PM enhanced soyabean growth and yield.

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