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Research Article

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Effect of inorganic and *Rhizobium* fertilizer levels on soil physco-chemical properties under pea (*Pisum sativum* L.) cultivation

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Summary

A field experiment was conducted on effect of different levels of inorganic fertilizers and *Rhizobium* on soil properties with pea (*Pisum sativum* L.) during *Rabi* season 2013-14 at the Research farm of Soil Science, Allahabad. The experiment was laid out in Randomized Block Design with three replications, with 3 × 3 factorial RBD, on sandy loam soil sand 61.73 per cent, silt 20.12 per cent and clay 18.15 per cent (Inceptisol), consisted nine treatment it was observed that the best findings were reported for post harvest soil properties in treatment T_8 L_2R_2 (N_{30} P_{60} K_{40} kg ha^{-1} and 20 g *Rhizobium* kg^{-1} seed), organic carbon 0.62 per cent, available nitrogen 273.43 kg ha^{-1}, phosphorus 29.60 kg ha^{-1}, potassium, 165.99 kg ha^{-1}, pore space 50.54 per cent, bulk density 1.35g cm^{-3}, particle density 2.73g cm^{-3}, pH 7.64 and EC at 25^{0}C 0.25 dSm^{-1}, respectively, and available nitrogen, phosphorus, organic carbon, pore space were found to be significant, and available potassium, bulk density, particle density, EC, pH were found to be non-significant. Adequate plant nutrient supply holds the key for improving the food grain production and sustaining soil fertility.

Key words : Inorganic fertilizer, *Rhizobium*, Soil properties, Pea

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