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Studies on alluvial soils of Motipur block - Muzaffarpur district of Bihar

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ABSTRACT : The nutrient status of representative soil samples of Motipur block situated in Muzaffarpur district of North Bihar were studied in year 2012 by collecting randomly surface soil samples (0-15 cm depth) from 283 sites. These soil samples were analyzed for pH, EC (Electrical Conductivity), organic carbon as well as available nitrogen, phosphorus and potassium. The pH of soil samples was observed in range of 7.91 and 8.60, it means soils were mildly to strongly alkaline in reaction. However, EC were in the normal range, which varied from 0.09 to 0.15 dsm^{-1}. Accordingly, EC is not limiting factor for optimum plant growth and development. As far as organic carbon content of the soils is concerned, it varied from 0.43 to 0.54%. Though, the majority of the soils of block were recorded low in respect to organic carbon i.e. 87% but rest was in medium range. On the other hand, available nitrogen (N) content in soil samples varied from 165.23 to 190.88 kg/ha, available phosphorus (P) from 9.75 to 15.25 kg/ha and available potassium (K) from 112.33 to 146.40 kg/ha. Moreover, 100% collected soil samples were low in respect to available N, whereas 92% and 96% soil samples were recorded in medium categories in relation to available P and K, respectively; and rest samples were low in magnitude in both the cases of nutrients.

Key Words : Nitrogen, pH, phosphorus, potassium, soil.