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Response of potato to fertilizers applied on different soil types in Kenyan Highlands

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Abstract

Declining soil fertility in Nitisols and Planosols, which dominate major potato (*Solanum tuberosum* L.) growing areas of Kenya, is a hindrance to sustainable production of the crop. A study was conducted in Nyandarua County, Kenya, to assess performance of potato and the agronomic efficiencies of three fertilizer types: diammonium phosphate (DAP) (N–P_2O_5–K_2O: 18–46–0), Mavuno Peas, Beans and Root Vegetables (MRV) (15N:8 P_2O_5:15 K_2O plus S, Ca, Mg, Fe, Cu, Zn, B, Mn, Mo), and new Mavuno blend (18N:24 P_2O_5:10 K_2O plus 5S, 0.04B, 0.02 Zn). The experiments were established on Nitisol and Planosol soil types in farmers' fields. Two potato varieties were evaluated in a split plot layout design. Diammonium phosphate had the highest and significant influence on potato haulm, giving 16.5 and 15.5 g plant^{-1} on variety Sherekea growing on Nitisol and Planosol, respectively. Fertilizer type significantly influenced potato yield, which was