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FERTILITY STATUS OF SOILS OF SHIMLA DISTRICT OF HIMACHAL PRADESH

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Soil survey was carried out during 2003 in potato growing areas in Shimla district. Twenty five surface soil samples (0-30 cm) were collected and analyzed for physico-chemical properties. The soils were acidic to neutral in reaction with pH varying from 5.15 to 7.32. The organic carbon content ranged from 0.63 to 3.34% with a mean value of 1.75%. The high organic carbon content and its wide variability in the soils may be due to low decomposition rate on account of prevalence of low temperature in the region. Total nitrogen content of the soils ranged from 0.12 to 0.34% with a mean value of 0.23%. Available phosphorus content (Bray P) varied from 13.5 to 124.0 kg ha^{-1} with a mean value 37.1 kg ha^{-1}. Keeping in view the critical limit of 35 ppm fixed for potato, these soils were deficient in P. Available K content ranged from 320 to 1827 ppm K with a mean value 829 ppm indicating that these soils were high in available K taking into consideration the 120 ppm critical limit fixed for these soils. DTPA zinc content ranged from 0.40 to 5.76 ppm averaged at 1.85 ppm. Only 16% samples were found to be deficient in Zn. Likewise Cu content ranged from 0.52 to 3.80 ppm, with an average value of 1.35 ppm. Soils in general were high in Fe and Mn content with an average value of 42.24 and 66.79 ppm, respectively. Results showed that micronutrients status in the soils was high keeping in view the critical limit of Zn, Cu, Mn and Fe fixed for potato.

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EFFECT OF PLANTING DATE ON SEED SIZE TUBER YIELD OF POTATO IN NILGIRIS

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A field experiment was conducted during summer seasons of 2003 and 2004 at CPRS, Muthorai with three dates of planting i.e. April 21st, May 22nd and June 21st using randomised block design with four replications using three cvs., *viz.,* Kufri Giriraj, Kufri Jyoti and Kufri Swarna. April 21st planting produced more number of seed size tubers and yield in cvs. Kufri Giriraj and Kufri Jyoti, whereas June 21st planting performed well with cv. Kufri Swarna by producing higher number of seed size tubers and yield. In cv. Kufri Jyoti among the three dates of planting, April 21st planting produced highest yield of seed size tubers (51.25q ha^{-1}) followed by June 21st planting (50.23q/ha^{-1}). In case of cv. Kufri Giriraj, maximum seed size tuber yield (46.5 q/ha) was obtained in April 21st planting followed by 21st June planting (32.71q/ha). Whereas, cv. Kufri Swarna produced higher seed size tuber yield (21.68q ha^{-1}) in 21st June planting. Number of Seed size tubers also followed the similar trend as that of yield. The interaction effect between date of planting and varieties were significant with respect to grade wise tuber yield. The results showed that the crop in Nilgiris should be planted around 21st April for achieving the highest yield and number of seed size tubers in cvs. Kufri Jyoti and Kufri Giriraj while Kufri Swarna may be planted on 21st June.