



Influence of different NPK Doses on Plant Growth and Soil Nutrient Contents of Apple (*Malus × domestica* Borkh.) Nursery

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Abstract: The present study was conducted to standardize NPK doses for nursery plants of apple. NPK doses were examined for their effects on growth of nursery plants of apple cv. Oregon Spur grafted on Merton 793 clonal rootstock and nutrient contents of nursery soil. The experiment comprised of 14 treatments where 12 treatments were combinations of NPK with 3 levels of N (N_1 , N_2 and N_3 @ 12, 15 and 18 g m⁻² nursery bed, respectively), two levels of P (P_1 and P_2 @ 3 and 6 gm⁻² nursery bed, respectively) and two levels of K (K_1 and K_2 @ 4.5 and 9 g m⁻² nursery bed, respectively), whereas two other treatments were Jeevamrut (10% drenching at fortnight intervals) and untreated control. The maximum linear growth, number of leaves per plant, leaf area, total root length, fresh and dry weight of roots, soil P and soil Mg were recorded in the plants treated with $N_3P_2K_1$. However, highest scion radial growth, internodal length, fresh and dry weight of shoots, total plant biomass, available soil N and soil K were registered by the plants subjected to $N_3P_2K_2$. The treatments $N_3P_2K_1$ and $N_3P_2K_2$ were statistically at par with one another with respect to majority of observations. Thus, the application of N:P:K @ 18:6:4.5 g m⁻² nursery bed, respectively was the most efficacious treatment and recommended for production of quality nursery plants of apple.

Keywords: Apple, Nursery, NPK, Plant growth, Soil nutrient contents
