

Turkish Journal of Agriculture and Forestry

Turkish Journal

of

Agriculture and Forestry

Rooting behaviour, polyphenol oxidase activity, and biochemical changes in grape rootstocks at different growth stages

Ramhari G. SOMKUWAR, Devanand D. BONDAGE, Manisha S. SURANGE, Sahadeo D. RAMTEKE
National Research Centre for Grapes, P. B. No. 3, Manjri Farm Post, Solapur Road, Pune - 412 307 -
INDIA

 [Find Manuscript](#)



agric@tubitak.gov.tr

[Scientific Journals Home
Page](#)

Abstract: Four grape rootstocks belonging to different *Vitis* species were planted in September. Rooting behaviour, polyphenol oxidase (PPO; EC 1.14.18.1) activity and biochemical parameters were studied at different growth stages after planting the cuttings in polythene bags. Significant differences were recorded for rooting success among the different rootstocks, with the maximum sprouting percentage determined in the Freedom rootstock. The highest variation in PPO activity was also recorded in Freedom. High PPO activity was recorded in rootstock 140 Ru, while the highest root length was recorded in Dog Ridge. In the rootstock 110 R, the PPO activity was the lowest during the initial stage, though it increased up to 60 days after planting (DAP) and was then reduced up to 90 DAP. Increases in the number of rooting primordials were recorded in all the different rootstocks at different stages of growth. A higher number of rooting primordials was recorded in Freedom, and it was followed by 110 R. The present study suggests the differences in the rooting behaviour of the different rootstocks are based on PPO activity at regular time intervals up to 90 DAP.

Key words: Biochemical constituents, grape rootstocks, growth parameters, polyphenol oxidase activity, rooting behaviour

Turk. J. Agric. For., **35**, (2011), 281-287.

Full text: [pdf](#)

Other articles published in the same issue: [Turk. J. Agric. For.,vol.35,iss.3.](#)