

International Agrophysics

Polish Journal of Soil Science

Acta Agrophysica

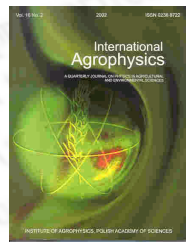
Instytut Agrofizyki

International Agrophysics

General information

Issues

Search



International Agrophysics

publisher: Institute of Agrophysics
Polish Academy of Sciences
Lublin, Poland

ISSN: 0236-8722

vol. 22, nr. 3 (2008)

[previous paper](#) [back to paper's list](#) [next paper](#)

Root distribution of apple tree under various irrigation systems within the hilly region of Romania

[\(get PDF !\[\]\(56549452e01ca28bdf2500ced9653143_img.jpg\)\)](#)

Tanasescu N., Paltineanu C.

Research Institute for Fruit Growing, 0312 Pitesti-Maracineni, Romania

vol. 18 (2004), nr. 2, pp. 175-180

abstract The present paper shows the effects of various irrigation methods on the distribution of roots in the Golden Delicious apple cultivar grafted on MM 106 rootstock under the specific conditions of the hilly region of Pitesti-Maracineni, Southern Romania. The results obtained here showed that a higher influence was induced by the different irrigation treatments to the active tree root cross-sectional area (TRCSA) versus the total TRCSA. A direct, linear and distinctly significant correlation was found between the sum of the total TRCSA and the fruit yield on the one hand, and between the total TRCSA and the annual growth in tree trunk cross-sectional area on the other hand. This study also revealed, from the TRCSA point of view, that in apple tree farming microsprinkler irrigation and drip irrigation would be the best methods to be used under the natural and technological conditions discussed here. They are fully recommended as the best irrigation methods in apple growing extension under similar soil and technology conditions in the temperate climate zone.

keywords root distribution, apple tree, irrigation