

عنوان مقاله:

The Effect of Chemical Thinning on Seasonal Changes of Mineral Nutrient Concentrations in Leaves and Fruits of 'Soltani' Apple Trees

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نویسندگان:

M. ZAREI - College of Agriculture, Isfahan University of Technology, Isfahan

B. B. BANINASAB - College of Agriculture, Isfahan University of Technology, Isfahan

A. A. RAMIN - College of Agriculture, Isfahan University of Technology, Isfahan

M. PIRMORADIAN - College of Agriculture, Isfahan University of Technology, Isfahan

خلاصه مقاله:

ABSTRACT- The purpose of this study was to elucidate the effects of chemical thinning on seasonal variations of leaf and fruit mineral compositions of 'Soltani' apple trees. Treatments, including unthinned control, naphthalene acetic acid (NAA) at 5 and 10 mg L⁻¹, naphthaeneacetamide (NAD) at 25 and 50 mg L⁻¹, benzyladenine (BA) at 50 and 100 mg L⁻¹ and carbaryl at 500 and 1000 mg L⁻¹ were applied when fruit diameters were about 8 to 10 mm. The results showed that leaf nitrogen (N), phosphorus (P) and potassium (K) concentrations decreased, whereas calcium (Ca) and magnesium (Mg) increased during the season. Fruit mineral concentration changed with the age of the fruits. All nutrients decreased with fruit maturation. Most chemical thinners affected leaf concentrations of N and K but not P, Ca and Mg. Chemical thinning increased the fruits' P, K and Mg concentrations. It is concluded that fruit chemical thinning may affect the accumulation of some nutrients, especially P and K in apple fruits and could improve fruit quality as well.

کلمات کلیدی:

Keywords: Apple, Chemical thinning, Mineral nutrients

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