

عنوان مقاله:

Fruit Volatiles, Quality, and Yield of Watermelon as Affected by Grafting

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نویسندگان:

S. A. Petropoulos - *University of Thessaly, School of Agricultural Sciences, Department of Agriculture, Crop Production and Rural Environment, Laboratory of Vegetable Production*

C. Olympios - *Agricultural University of Athens, Department of Crop Production, Laboratory of Vegetable Production*

A. Ropokis - *Agricultural University of Athens, Department of Crop Production, Laboratory of Vegetable Production*

G. Vlachou - *Agricultural University of Athens, Department of Crop Production, Laboratory of Vegetable Production*

G. Ntatsi - *Agricultural University of Athens, Department of Crop Production, Laboratory of Vegetable Production*

A. Paraskevopoulos - *Perfecture of Messinia, Department of Rural Development and Food*

.H. C. Passam - *Laboratory of Vegetable Production, Agricultural University of Athens, Greece*

خلاصه مقاله:

The aim of the present study was to examine the effect of grafting of watermelon hybrids 'Obla F₁' and 'Vanessa F₁' on to Cucurbita maxima × Cucurbita moschata rootstock TZ ۱۴۸ and Lagenaria sp. rootstock 'Dias F₁', on the volatiles and yield of fruit and the plant growth. Fruit volatiles analysis showed the presence of two aldehydes, namely (E)-۲-nonenal and (E,Z)-۲,۶-nonadien-۱-al, with (E)-۲-nonenal being present at higher concentrations in grafted than in ungrafted plants. Grafted plants had also higher growth rate, total yield, and fruit number than ungrafted plants, whereas the percent dry matter of leaves and shoots was higher in ungrafted plants. No differences were observed for mean fruit weight, fruit shape, and rind thickness. Fruit from grafted plants had more compact flesh and less acid fruit juice than fruit from ungrafted plants. Fruit volatile components differed between ungrafted and grafted plants. With regards to sugar content, no significant differences between grafted and ungrafted plants were observed, except in the case of 'Obla F₁' hybrids. Sodium concentration of plant tissues and fruit was higher in 'Obla F₁' ungrafted plants, as well as carotenoid, lycopene, and vitamin C content in fruit, but only in the second year. In conclusion, rootstock-scion combination implemented in the present study affected plant growth and fruit yield and quality, rendering the choice of .rootstocks and scions of major importance in order to achieve the highest yield and quality of watermelon fruit

کلمات کلیدی:

Citrullus vulgaris L, Obla F₁ hybrid, Vanessa F₁ hybrid, Volatiles profile

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