



# THE BOOK OF ABSTRACTS

*V Balkan Symposium on Fruit Growing*  
*June 18-21, 2023*  
*Zagreb, Croatia*



**University of Zagreb Faculty of Agriculture  
Department of Pomology**



# **V Balkan Symposium on Fruit Growing**

**The Book of Abstracts**



**June 18-21, 2023, Zagreb, Croatia**

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## THE ROOTSTOCK AND TIME OF HARVEST INFLUENCE THE CHEMICAL COMPOSITION OF THE PLUM

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### Abstract

Despite Serbia being among the world's largest producers of plums with about 5% of production, seedlings of 'Mirobalan' (*Prunus cerasifera* Ehrh.), characterized by a number of disadvantages, represent the most commonly used plum rootstock. Considering the intensification of plum production this study was aimed to characterize by yield and content of sugars and organic acids, as well as phenols in plum cultivar 'Čačanska Lepotica' grafted on four vegetative rootstocks (three medium vigor 'Docera 6', 'Wavit' and 'Weiwa' and one low vigor rootstock 'Dospina 235') during two years (2017–2018). According to the analyses of primary metabolites, the harvest season effect was more predominant than the rootstock. Fruits harvested in 2017 were the best results for total sugars and sugars/acids ratio (94.0 g/kg FW and 5.6, respectively) while fruits harvested in 2018 had significantly higher phenol content (253.8 mg/kg FW). The dominant phenolic compounds in plum fruits were phenolic acids and flavanols, while flavonols and anthocyanins were determined in a lower concentration. The results demonstrate a significant influence of rootstock on phenolic content in plum fruits. All tested phenolic groups were significantly higher in the fruit of 'Čačanska Lepotica' grafted on 'Docera 6' and 'Dospina 235' in both tested years, except the content of flavonols and anthocyanins in grafting combination with rootstocks 'Wavit' and 'Weiwa' in 2017. In order to improve the intensity of plum growing and the nutritional quality of fruits, 'Docera 6', rootstock with hypersensitive resistance to Plum pox virus (PPV), can be recommended for further expansion in agroecological conditions of southeast Europe.

*Keywords:* *Prunus domestica*, vegetative rootstocks, sugars, organic acids, phenols