

2ND INTERNATIONAL SYMPOSIUM ON FRUIT CULTURE ALONG SILK ROAD COUNTRIES
"FRUITS FOR THE FUTURE"



BOOK OF ABSTRACTS

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International Society for Horticultural Science
and
Society for Horticultural Science of Bosnia and Herzegovina

in cooperation with



The Society for Fruit Growing Sciences
of the Republic of Srpska



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THE EFFECT OF DRYING TEMPERATURE AND DIPPING ON PRUNE QUALITY

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MODERN production of prunes is determined by the requirements of the market, demanding well-dried fruits of uniform size and colour, possessing a harmonious flavour and a marked pleasant aroma. Drying of plums is a slow and time-consuming process, since the fruits are dried as a whole. Optimization of the process aimed at reducing the drying time without compromising the quality of the prunes is performed by applying different drying temperatures and preparation treatments, most typically dipping. Testing was performed in three replications using plum fruits of the 'Čačanska Lepotica', 'Mildora', 'Čačanska Rodna' and 'Stanley' cultivars, at the optimum ripening stage required for dry-processing based on soluble solid contents. Drying was performed at the experimental dryer using the convective (flow-through) drying process, at two constant air temperatures, 90 °C and 70 °C, until attaining 75% of total dry matter in prunes. In addition to the control, the fruits were subjected to a pre-treatment consisting of dipping in boiling water. The quality parameters tested in the dried fruits were the content of sugars, content of acids, sugar/acid ratio and the visual appearance in terms of rejecting fruits of uneven colour. Results indicated the fact that the intensity of drying temperature and dipping have no impact on the chemical composition of prunes, with the exception of the sucrose content, which is primarily determined by the genotype. In drying at the lower temperature (70 °C), dipping reduced the number of fruits not meeting the required colour, in cultivars 'Čačanska Lepotica' and 'Stanley'. At the same time, no impact was observed in the fruits subjected to dipping at 90 °C.

KEY WORDS: Plum, Cultivar, Chemical composition, Sugar-acid ratio

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