



Plum and Prune
XII Symposium

Zlatibor, Serbia

**XII International Symposium on Plum and
Prune Genetics, Breeding and Pomology**

**PROGRAMME AND BOOK OF
ABSTRACTS**

September 14–17, 2021

Zlatibor, Serbia

**PROGRAMME AND BOOK OF ABSTRACTS OF XII INTERNATIONAL
SYMPOSIUM ON PLUM AND PRUNE GENETICS, BREEDING AND
POMOLOGY**

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THE EFFECT OF FOLIAR SPRAYS CONTAINING CALCIUM ON QUALITY AND STORABILITY OF 'STANLEY' PLUM FRUIT

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Loss of firmness is one of the major restraints for postharvest handling and adequate storage of plum fruits. In order to improve the fruit quality various pre- and postharvest treatments could be applied. The aim of this research was to evaluate the effect of foliar sprays containing calcium on postharvest quality of 'Stanley' fruits during two consecutive years. Three commercial sprays containing calcium were used in the experiment. The first spray contained calcium and boron, the second one calcium and phosphorus, whilst the third one contained calcium. The treatments involved four foliar applications, ten days after petal fall at twenty-day intervals. Unsprayed trees represented the control. All treatments significantly increased fruit firmness at harvest. However, no such effect was observed after four weeks of cold storage although fruits from treated trees had higher content of calcium. At harvest, fruits from the trees sprayed with calcium and phosphorus had significantly higher content of soluble solids, total acids and protopectin in comparison with two other treatments and control fruits. Neither fruit weight nor dimensions were affected by any of preharvest foliar treatments. The lowest weight loss after storage was recorded in fruits treated with the spray containing only calcium. The content of total acids, potassium and soluble solids depended on treatment, year and their interaction, both at harvest and after storage. There was a significant positive correlation between the fruit firmness at harvest and content of potassium and protopectin. However, firmness of fruits after storage was significantly positively correlated not only with the content of potassium, but also with the content of calcium.

Keywords: *Prunus domestica* L., postharvest quality, cold storage, fruit firmness, pectin.