

Title Physicochemical changes of sweet cherry fruits related to application of gibberellic acid  
Author V. Usenik, D. Kastelec and F. Štampar  
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### **Abstract**

The influence of gibberellic acid on the physical and chemical properties of sweet cherry fruits during ripening (development of fruit colour) and at fruit maturity (firmness of fruits, cracking index, water uptake, soluble solids content, total acidity, fruit dimensions) of three sweet cherry cvs. 'Van', 'Sunburst' and 'Elisa' grown in a climate with frequent rainfall during fruit maturation were studied. Fruits of cv. 'Elisa' were prematurely picked because of cracking. A significant main effect of GA<sub>3</sub> treatment and significant main effect of cultivars were established in fruit colour development. The means of firmness and soluble solids content were systematically higher for the cherries of 'Van' and 'Sunburst' treated with GA<sub>3</sub> but they were not significant at  $\alpha=0.05$ . The fruit cracking was significantly smaller for GA<sub>3</sub>-treated fruits of the cv. 'Sunburst' after 4 h in water. Gibberellic-treated fruits of both cultivars were larger in fruit weight than untreated fruits; the differences were significant at  $\alpha=0.10$ . Fruit dimensions: height, width and thickness of both cultivars were significantly affected by GA<sub>3</sub> treatment. The response of sweet cherry fruits to GA<sub>3</sub> spraying depended on the properties of the cultivar.