

**Title** Effect of ethrel and 1-methylcyclopropene (1-MCP) on antioxidants in mango (*Mangifera indica* var. Dashehari) during fruit ripening

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### **Abstract**

Ripening affects the quality and nutritional contents of fleshy fruits. Mango, a climacteric fruit, is very susceptible to post-harvest losses, due to fast softening. In the present paper we report the effect of 1-methylcyclopropene (1-MCP) and Ethrel on antioxidant levels in mango fruit during ripening. Use of 1-MCP is applied commercially to delay ripening while Ethrel is used to accelerate ripening of climacteric fruits. 1-MCP treatment led to decreased levels of H<sub>2</sub>O<sub>2</sub> and lipid peroxidation, concomitant with increased activities and isozymes of catalase (CAT) and superoxide dismutase (SOD), as compared to respective controls. On the other hand, Ethrel treatment led to an increase in H<sub>2</sub>O<sub>2</sub> and lipid peroxidation, concomitant with a decrease in the activities and isozymes of catalase and SOD. Guaiacol peroxidase (GPX) could not be detected in the control or in treated fruits. Activity of ascorbate peroxidase (APX) was found to drastically increase in the presence of Ethrel while 1-MCP treatment led to only a marginal increase in APX.