

Title Shelf life extension of tomato fruits by postharvest antioxidant application
Authors Bhagwan, A.
Citation Journal of Applied Horticulture (Lucknow) Vol: 2 (2000); 88-91

Abstract

The effect of postharvest application of ascorbic acid, sodium benzoate, and benzyladenine at two levels of concentration on the days to ripening, shelf life, and various physicochemical properties was studied. Benzyladenine at 50 ppm improved the shelf life to 42 days, followed by benzyladenine at 25 ppm (37 days) and sodium benzoate at 1000 ppm (35 days), compared to the control (26 days). Physiological weight loss increased throughout the storage period while sugars, total soluble solids (TSS), and acidity increased up to the 14th day and then declined in the control and treated fruits. Treatments that improved the shelf life maintained better fruit quality in terms of higher reducing sugars, TSS, and acidity. Peak ethylene production reached the 14th (7.43 nl g⁻¹ h⁻¹) day in benzyladenine at 50 ppm and on the 11th day (6.75 nl g⁻¹ h⁻¹) in sodium benzoate at 1000 ppm when compared to the 11th day (8.15 nl g⁻¹ h⁻¹) in the control. The reduced and delayed peak ethylene production in benzyladenine- and sodium-benzoate-treated fruits might be responsible for delayed ripening and improved shelf life.