

Title Effect of post harvest application of calcium chloride on the storage life of two Iranian grape cultivars

Author Hamed Doulati Baneh, Khaled Samet and Sergon Odisho

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Abstract

To evaluate the effects of post harvest calcium application on the storage life and some qualitative traits of two Iranian grapevines, this research was conducted in a Factorial experiment using a complete randomized blocks (CRBD) with two treatments and three replications. Treatments were dipping of harvested fruits of two grape cultivars (Bidane sefid and Shahroudi) in three concentration of CaCl₂ solution (0, 1 and 4 %). Each experimental unit had one tree and in total 18 trees was used. At harvest time, fruits was picked and dipped in calcium solution then handled to cold storage. Before transport to storage and every 30 days in cold storage, some berry traits including TSS, pH, TA, loss of weight, dropping and browning rate, calcium content and percent of decay was measured. Effect of CaCl₂ on fruit decay was significant at 1 % level and minimum decay was observed using 4% treatments. Calcium also had significant effects on berry TSS, weight loss, calcium content, browning, shattering and shriveling. While Calcium content of berries was increased by CaCl₂ dipping treatments compared with control, but the weight loss of berries in those treatments was higher than control.