

Title Effect of pre-storage application of different organic and inorganic salts on stored potato quality

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Abstract

The application of salts including aluminium chloride, potassium sorbate, sodium benzoate and sodium metabisulfite has been shown to control diseases of stored potato tubers. In order to integrate salt application in the disease control strategies, it is imperative to evaluate their effect on the quality of stored tubers. The effect of salt application either alone (0.05 M and 0.2 M) or in combination on quality attributes of tubers of two cultivars (Norland and Shepody) stored at 4 °C for up to 6 months was evaluated. Higher weight losses were generally observed in tubers treated with aluminium chloride and sodium metabisulfite after 6 months of storage, while the organic salts, sodium benzoate and potassium sorbate, exhibited weight losses comparable to that of the control tubers. Both organic salts at a concentration of 0.2 M decreased sprout growth on Shepody cultivar tubers. Sodium benzoate was shown to increase the sugar content of the stored tubers.