

Title Storage potential of 'Kyoho' grape as influenced by harvest date and temperature during storage and marketing simulation

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Citation Horticulture, Environment, and Biotechnology, 49(5) p. 314-319, 2008.

Keywords Berry shattering; Consumer acceptance; Overall taste; Shelf temperature

Abstract

Changes in instrumental quality attributes, overall taste, and incidence of losses were investigated during 4-month refrigerated storage of 'Kyoho' grape to determine storage potential as influenced by harvest date, storage and marketing procedures. Grapes were harvested twice at 5-day interval, stored at 0 and -1°C for four months and then put on the shelf at 7 and 20°C for 6 days. The changing patterns of soluble solid concentrations (SSC) and juice acidity were not consistent during storage. Flesh firmness and overall taste, in contrast, tended to decrease as storage period extended over 3 months. Significant factors affecting quality attributes and overall taste during the storage were: harvest date on SSC and juice acidity, and shelf temperature on flesh firmness after 3- and 4-month storage. Berry shattering increased notably between 1- and 2-month storage, while decay increased between 2 and 3 months of storage. Beneficial effects of treatments on the reduction of postharvest losses were: early harvest on the decay and low shelf temperature on the incidence of shattering and decay. Overall evaluation of quality factors and postharvest losses indicated that the determinative factor for the storage potential of 'Kyoho' grape was not the edible quality but the incidence of postharvest losses. Storage potential seemed to be extended to 3 months by applying low shelf temperature during marketing as a prerequisite condition.