

Title Respiratory characteristics and changes in quality of garland chrysanthemum (*Chrysanthemum coronarium*) during simulated distribution conditions

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Abstract

As a step to construct the model that would predict the quality changes in vegetables and fruits during distribution, the purpose of this paper is to clarify the respiratory characteristic and the change in quality of garland chrysanthemum (*Chrysanthemum coronarium* ‘Hakata kairyo chuba’) during simulated distribution conditions. The survey of an actual distribution process of garland chrysanthemum had revealed that the temperature management was conducted at each stage of distribution, with the exception of coordination room of the retail store. Humidity and gas concentration remained nearly constant during distribution. There was considerable variability of the respiration rate of garland chrysanthemum from just behind harvest to after 23 h in the distribution chain. The rate of decline in sugar contents increased when a rapid temperature change occurred under the simulated distribution conditions. A decrease in the content of ascorbic acid during exposure to the high temperatures accounted for 88% of the decrease during the entire distribution test period.