

The Effect of Post-harvest Temperature on Fruit Quality of 'Taitung No.2' Sugar Apple (*Annona squamosa* L.)

Shu-Wen Jiang¹, Fang-Kuei Chang², Hsiao-Chun Chen², and Po-Song Lu³

Abstract

In order to study the effect of different post-harvest temperature on the fruits ripening and quality of 'Taitung No. 2' sugar apple (*Annona squamosa* L.), this research stored the fruits at the 20°C, 25°C, 30°C and 35°C condition, then investigated the quality of summer fruit and winter fruit. The result showed that summer fruit only which treated with 35°C had 7.5% of fruit appeared brown spot at peel, 32.5% of fruit showed core brown spot and 22.5% of fruit had uneven ripening, while the other temperature treatment had normal appearance and quality. There was significant difference in soft-ripening days, weight loss rate and pulp taste, but there was no significant difference in chromatic aberration and total soluble solid. Based on above, the summer fruits stored in 35°C showed worst performance, fruits treated with 20°C to 30°C could be soft and ripen normally, and the appearance and quality of fruit would be good. Winter fruits had the similar behaviors. Only the 35°C treatment showed 12.5% of fruit appeared brown spot at peel, 22.5% of fruit showed core brown spot and 2.5% of fruit had uneven ripening. The fruit appearance and quality of other treatment were normal. There was significant difference in soft-ripening days, weight loss rate and total soluble solid among the treatment. The chromatic aberration of peel had the significant difference in H* value among the treatment. Overall, fruit stored in 20°C to 30°C could ripe normally, the appearance and quality were good.

Keywords: Sugar apple, Temperature, Post-harvest, Quality, Peel color

¹Associate Researcher and Chief of Banchiu Branch Station of Taitung DARES, MOA.

²Assistant Researcher of Taitung DARES, MOA.

³Researcher and Deputy Director of Taitung DARES, MOA.