

Title Study on fruit quality analysis and storage properties of ‘Jin Shui Gan’ with different harvest time

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Abstract

‘Jin Shui Gan’ (named also ‘E GAn No.1’) is a new Ponkan (*Citrus reticulata* Blanco) variety obtained from common Ponkan by seedling selection in the Institute of Fruit and Tea, Hubei Academy of Agricultural Sciences (HBAAS). At present, the cultivation area of ‘Jin Shui Gan’ is over 13, 000 hm² in Hubei Province, promoting the restructuring of *Citrus* varieties, has become the popular *Citrus* cultivar in the northern margin of citrus producing in China. However, its fruit physiological maturity is relatively late, and early harvest phenomenon appears in many orchards, so fruit quality can not reach the inherent characteristics of the variety and the value of the goods is reduced. In order to determine the optimal harvest period of ‘Jin Shui Gan’ in Hubei, the effects of ‘Jin Shui Gan’ with different harvest time on fruit quality and storage were studied. The result showed that early December was considered to be the best suitable harvest time of ‘Jin Shui Gan’ fruit. During this period, the fruit was orange-colored, with brightness, full weight and good elastane by hand touch. Furthermore, the fruit had completely reached the full ripening index with sweet flavor and best quality. If picked earlier, titrable acid (TA) content of fruit was very high, and the starch was not completely inverted. So the fruit palatability was not the best, and it also easily loss water with lightly flavor during the storage period. After picked suitably, total soluble solid (TSS) content of fruit was high, and with appropriate TA content, and the ratio of TSS/TA was also high. So the fruit palatability was the best, and water loss rate of fruit was lower during storage period. Especially after storage, TSS content still kept highly, and fruit flavor didn’t fall down after stored in March next year.