

**Title** H<sub>2</sub>O<sub>2</sub> as an effective control method on postharvest Chinese winter jujube fruit pericarp color red turning

**Author** Lin Shen, Shimin Chang and Jiping Sheng

**Citation** Abstracts of 27th International Horticultural Congress & Exhibition (IHC 2006), August 13-19, 2006, COEX (Convention & Exhibition), Seoul, Korea. 494 pages.

**Keywords** Chinese winter jujube; pericarp; color; H<sub>2</sub>O<sub>2</sub>; GA<sub>3</sub>

### **Abstract**

Chinese Winter Jujube (*Zizyphus jujube* Mill cv. Winter Jujube) with high nutritional value has become the most important jujube variety for fresh use. Pericarp color of red with green is good preference for clients and processing requirement, but effective red turning control methods need to be developed in practice. The objective of this study is to find a suitable way to control the red turning. H<sub>2</sub>O<sub>2</sub> and GA<sub>3</sub> were used as treatments, and the red turning rate, rot rate, tasting evaluation and some enzyme activities were analyzed. The results showed that the red turning could finish in 5 days in control (water treatment), 7 days in GA<sub>3</sub> treatment (50 µg/L GA<sub>3</sub> 10 min) and 10 days in H<sub>2</sub>O<sub>2</sub> treatment (2.0x10<sup>-3</sup> mol/L H<sub>2</sub>O<sub>2</sub> 10 min). SOD and POD activities in fruit treated with H<sub>2</sub>O<sub>2</sub> were higher than that of GA<sub>3</sub> and control in the first 5 days, but the PAL activity was significant lower. The rot rate of H<sub>2</sub>O<sub>2</sub> and G<sub>3</sub> treated fruit was 30% and 25% lower than control at the 15<sup>th</sup> day after treatment, respectively. The tasting evaluation showed that the fruits treated with H<sub>2</sub>O<sub>2</sub> was the best, the fruit with GA<sub>3</sub> treatment was a little strong in pericarp, the control was the worst with alcohol flavor. We considered that H<sub>2</sub>O<sub>2</sub> treatment might be a good way to control Chinese Winter Jujube fruit pericarp color red turning.