Title Effect of 1-MCP on shelf life extension of 'Wonhwang' pears

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Abstract

'Wonhwang' pear (*Pyrus pyrifolia* Nakai.) has large fruit size, good appearance and high eating quality. But their shelf life is very short, around 7 days under ambient temperatures. In an attempt to maintain fruit quality during marketing, they were harvested in an immature condition for export to foreign countries. Therefore, techniques should be developed to prolong shelf life of 'Wonhwang' during their export and marketing. This experiment was carried out to confirm the effect of 1-MCP on shelf life extension of 'Wonhwang' fruit. Fruit were harvested on each of 125, 130, 135, 140 days after full bloom and were exposed to 1-MCP 1.0 mg/L concentration for 15 hours. After 1-MCP treatment, fruit respiration was inhibited significantly but ethylene production of fruit showed little difference compared with non-treated fruit. Fruit firmness of 'Wonhwang' which was harvested 135 days after full bloom (maturity stage of the fruit) was maintained for 25 days over 15 N under 1-MCP treatment. But 'Wonhwang' which wasn't treated with 1-MCP was maintained only 15 days. Through this experiment, the storage periods of 'Wonhwang' was prolonged about 5~7 days in the case of 1-MCP treatment under the room temperature conditions.