Title Effect of 1-methylcyclopropene (1-MCP) on green life of banana fruits harvested one and two weeks passed the conventional harvest index

Author A. Vargas , M. González and A. Ureña-Padilla

Citation ISHS Acta Horticulturae 906:259-265.2011.

Keywords *Musa* AAA; postharvest; subgroup 'Cavendish'; harvest

Abstract

The effect of 1-MCP on "green" postharvest life of Banana (*Musa* AAA) fruits, subgroup 'Cavendish', was investigated. The evaluation started by cutting "hands" out of the stalk, after the fruits stayed for one or two weeks beyond (13 and 14 weeks after flowering) the common commercial harvest index based on size of the fruit. The fruits were subjected to immersion for 0, 10, 20, 30 and 40 µg/L of 1-MCP, introduced in a Banavac plastic bag and packed in 12.7 kg orrugated boxes. Temperature of the fruit was decreased gradually to final storage at 16°C. The evaluation of the "green" color of the fruits was conducted until the fruits reached level 3 in the common color table used for bananas or the Von Loesecke scale. The results showed differences for both groups of bananas, indicating that 1-MCP can retard the change in color of bananas. Moreover, there was a linear trend among the 1-MCP treatments confirming highest effect with the highest concentration. The green color was prolonged further in fruits that were only left for one week past the common harvest index as compared to those that were kept for two weeks. These results show that the use of 1-MCP can be a useful tool for determining harvest dates in commercial operations.