Title A combination of physical and chemical postharvest treatment to prolong berangan banana fruit postharvest life

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Abstract

The postharvest life of banana is limited by physiological deterioration which leads to decay by disease development. Generally, delaying some reactions associated with ripening in harvested fruit can prolong storage and shelflife. This study was carried out to examine the effects of hot water temperature of 50 °C dipped for 0 (control), 10 and 20 min in combination with or without fungicide (Benomyl) on the quality characteristics and anthracnose rot of Be rang an banana during ripening. Fruit dipped in hot water of 50 °C for 10 and 20 min retarded peel colour (L *, C* and h°) changes and slowed down fruit softening process. Regardless of fungicide, fruit dipped in hot water of 10 and 20 min developed desirable colour and firmness characteristics. Hot water dip treatment did not affect fruit pulp colour, titratable acidity and pH. The soluble solids concentration of treated fruit without or with fungicide decreased as dipping time increased. Meanwhile, hot water temperature of 50 °C for 10 and 20 min whether added with fungicide or not has slowed down respiration and ethylene production in Berangan banana. The results clearly demonstrated that by dipping Berangan banana fruit in hot water of 50 °C for 10 and 20 min without fungicide was able to control anthracnose rot and delay fruit ripening. It is suggested that hot water of 50 °C and 10 min dipping time without fungicide could be used as a treatment to extend postharvest life of Berangan banana during export. The heat treatment provides an alternative for those who wish to minimize the use of chemicals during postharvest handling.