Abstract:

Banana (*Musa acuminate* 'Williams Cavendish' Colla) marketable life is governed by ripening conditions and can be manipulated with post-ripening treatments; however, these processes are poorly understood. We examined the effect of ripening temperatures throughout the year, post-ripening 1-methyl cyclopropene (1-MCP) exposure and vacuum ethanol infiltration on banana marketable life and quality. Ripening fruit throughout the year at 18-20 °C resulted in fruit with less peel discolouration, due to in-field chilling in colder months or cyclones in warmer months, compared with 14-16 °C; however, in summer 14-16 °C extended marketable life. 1-MCP at 300 $nL \cdot L^{-1}$ doubled banana marketable life to more than 6 days at 20 ºC without affecting fruit quality, but 3 $nL \cdot L^{-1}$ had little effect and 30,000 $nL \cdot L^{-1}$ stopped ripening all-together. Vacuum-infiltration with ethanol did not extend marketable life as ethanol did not penetrate into pulp tissues.