Abstract

Water loss after harvest affects the quality of avocados by changing the rate of ripening and/or increasing postharvest disorders. Avocado fruit typically ripen with four distinct phases, inhibition, pre-climacteric, climacteric, and post-climacteric where ethylene plays a major role. The trigger for ripening in avocados is unknown but may be related to water loss initiating ethylene production. An understanding of how water loss affects the expression of disorders and ripening would be helpful in optimising postharvest disorders handling practices for minimising postharvest disorders. To determine the effect of water loss on ripening and development of disorders water loss was induced or water was added to the fruit by imbibing at the different stages of the climacteric. Water loss was induced by taking fruit from high humidity conditions and placing them into low humidity for the duration of the ripening phases. Water was added by imbibing fruit at the inhibition, pre-climacteric and climacteric phases. Water loss during the inhibition phases of ripening and reduced stem end rots. Imbibing during the later phases of ripening had no effect on ripening rate or incidence of disorders . The effects of water loss appeared to be correlated to ethylene biosynthesis. Maintaining minimal water loss and preventing exposure to ethylene during the harvesting and packing period of the postharvest handling chain should be considered as a best practice goal.