

#### Abstract:

Effects of non-chilling and chilling storage temperatures on ethylene biosynthesis during fruit ripening in 'Kensington Pride' mango (*Mangifera indica*) were studied. Mature mango fruit were stored at chilling (5 °C) and non-chilling (15 °C) temperatures for two weeks, were ripened at 22±1 °C and then assessed for chilling injury (CI), ethylene production, 1-aminocyclopropane-1-carboxylic acid (ACC) oxidase and ACC synthase activities and ACC content during the fruit ripening period. CI symptoms were observed during fruit ripening in the fruit stored at 5 °C and significantly increased as the ripening period was extended. Ethylene production, ACC oxidase, ACC synthase and ACC content in the skin and pulp were reduced in the fruit which were stored at 5 °C compared with those stored at 15 °C prior to ripening. These results showed that the suppression of ethylene biosynthesis during ripening in fruit stored at chilling temperature was due to reduced activities of ACC oxidase, and ACC synthase, and may be associated with the development of CI symptoms in 'Kensington Pride' mangos.