

Title Research and development for quality and safety of fresh and fresh cut produce in Indonesia
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Abstract

Research and development of post harvest technology and practices for various tropical fruits and vegetables and vegetables in Indonesia has been conducted to meet the export market requirement such as food safety and demanded storage and shelf life, and to product value. Manual and operation for packing house has been developed in efforts to support the establishment of terminal and sub-terminal agribusinesses in cities, respectively, at the central markets and the production centres.

Control atmosphere (CA) model system for storage and ripening have been designed based on the changes of atmospheric composition in the storage and ripening container due to the product respiration. Passive modified atmosphere packaging (MAP) has been observed to be capable in improving the storage and shelf life of various fruits and vegetables, and fresh-cut fruits and vegetables. However, active MAP is foreseen as a favorable system for the export market. Edible coating has been investigated as another mean to extent the shelf life of fresh-cut produce. While fresh cut vegetables have been commercially supplied to multinational chain restaurant domestically, frozen fresh-cut fruits have been commercially exported.

To achieve the prime quality for export fruits and vegetables, non-destructive evaluation methods have been developed to support fruit grading and sorting such as identifying the seedless lanzone using visible light; the colour of mango and the bruise spread in salak using image processing; the sour-sweet taste of mango using NIR (near infra-red reflectance); and the interior quality of mangosteen and durian using ultrasonic wave.