BOOK OF ABSTRACTS

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POSTHARVEST PACKAGE OF SUGAR-ESTHER BLEND OF KD-112 AND PLASTIC WRAPPING APPLIED TO MANGOSTEEN FRUIT OF DIFFERENT FRUIT STAGES ON AFFECTING FRUIT SHELF-LIFE AND QUALITIES

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Having a very thick rind which is frequently believed as a good physical barrier to fruit deterioration from a high transpiration rate, the mangosteen fruit hardly receives any postharvest technology to lengthen its fruit shelf-life and maintain its high fruit qualities. This research was aimed at studying postharvest applications of sugar-esther-blend of KD-112 and plastic wrapping applied to different fruit stages in affecting fruit shelf-life and qualities of mangosteen. This study used a Randomized Complete Block Design with five replicates arranged in a factorial 4 × 3 × 2. The first factor was mangosteen fruit stage (0, 2nd, 3rd, and 4th stages), the second one was KD-112 (0, 7, and 14%), and the third one was plastic wrapping (without and with one layer of plastic wrapping). The results showed that by harvesting mangosteen at younger fruit stages of stage 0 and 2nd, its fruit shelf-life was able to be extended significantly up to 3.02-4.73 days longer compared to harvesting at later stages. A single treatment of 14% KD-112 or plastic wrapping was able to extend fruit shelf-life significantly up to 5.96 or 4.56 days longer, consecutively. By combining both treatments of 14% KD-112 and plastic wrapping, and applied to younger fruit stages of stage 0 and 2nd, the longest fruit shelf-life of 20.83-22,60 days could be achieved, that were 8.43-10.20 days longer than fruit of the youngest stage receiving no fruit coatings, while its fruit qualities were not affected.

Keywords: coating, Garciana mangostana, packaging, stadium, storage