

Title Relationship between flesh firmness and pectic polysaccharide content in 'Red Maradol' and 'Kaek-dum' papaya fruit during ripening

Author W. Krongyut, V. Srilaong, A. Uthairatanakij and S. Kanlayanarat

Citation ISHS Acta Horticulturae 837:239-242. 2009.

Keyword papaya; ripening; pectic polysaccharide changes; firmness

Abstract

The relationship between flesh firmness and pectic polysaccharide content in 'Red Maradol' and 'Kaek-dum' papaya fruit during ripening was investigated. Papaya fruit were harvested at the stage when one-fourth of the peel showed yellowing and were stored at room temperature (25 ± 2°C, 83-86% RH). Flesh firmness of 'Red Maradol' was higher than that of 'Kaek-dum' but it exhibited a rapid decline during the first two weeks of storage followed by a slight change towards the end of storage period. 'Kaek-dum' papaya fruit on the other hand, had lower flesh firmness than 'Red Maradol' but the former variety exhibited a slight to almost negligible decrease in flesh firmness throughout storage. The water-soluble pectin (WSP) content of 'Kaek-dum' was significantly higher than 'Red Maradol'. During storage, WSP content of 'Red Maradol' markedly increased on the first day followed by slight increase until the end of storage. WSP content of 'Kaek-dum' remained at almost constant level during the 5-day storage. There was a higher relationship between flesh firmness and WSP content in 'Red Maradol' than in 'Kaek-dum'. The results indicated that the WSP content can not be used as an indicator of softening in 'Kaek-dum' papaya.