Title Development of perforated modified atmosphere package for mango

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Abstract

Unperforated PVC film used for seal-packaging of mango was not sufficiently permeable to O_2 exchange required for the proper ripening of the flesh and the color development of the peel. Thai mango 'Nam Dork Mai' stored at 20 °C required a perforated area $\geq$ 0.004 cm^2 ($\geq$ 7 % O_2) to allow proper ripening and to stop off flavor noticeable in unperforated PVC film packages. The carotene pigmentation of the peel needed a higher level of O_2 than the flesh. Perforation of the film with pore area $\geq$ 0.39 cm^2 (O_2 $\geq$ 19%) required 2 weeks for the proper color development of the peel but with pore area $\geq$ 0.008 cm^2 (O_2 $\geq$ 7%) it required 3 weeks. 'Keitt' mango studied in Israel responded positively to the delay of over-ripening in unperforated polyolefin films during prolonged storage (4–5 weeks plus 1 week of shelf life).