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Project Report

**EFFECT OF MODIFIED ATMOSPHERE ON EXTENDING
STORAGE LIFE OF 'EMBON' BANANA**

A PROJECT REPORT PRESENTED

BY

W.M. DEEPIKA PRIYADARSHANI

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SRI LANKA

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ABSTRACT

A study was conducted to examine the effect of Modified Atmosphere storage on physico-chemical and sensory quality of "Embon" banana and to examine the effect of papaya latex on crown rot development.

Mature green "Embon" banana were packed under modified atmosphere (MA) condition using low-density polyethylene (0.05mm) bags. The MA conditions were created by sealed polyethylene bags (SPEB), evacuated and sealed polyethylene bags (EPEB) and a control using perforated polyethylene bags (PEB) at 14°C for 28 days. Peel color development, chilling injury, percentage weight loss, changes in firmness, total soluble solids (TSS), titratable acidity (TA) and pH were observed after 14, 21 and 28 days of storage. After termination of storage life, banana was allowed to ripen naturally, and the sensory quality of ripened banana was evaluated. Control fruits initiated ripening after 21 days of storage, while fruits held under SPEB and EPEB remained green and firm after 28 days of storage. No significant difference was found on percentage weight loss, total soluble solids, titratable acidity, peel color and chilling injury between SPEB and EPEB stored bananas through out the storage. The sensory quality of table ripe MA stored "Embon" banana remained unaffected regardless of storage period.

Cut crown surfaces of "Embon" banana were treated with benomyl and papaya latex (1ml/crown) and stored in MA conditions using SPEB, EPEB and control with perforated bags. Extent of crown rot development was observed after 14, 21 and 28 days of storage. Papaya latex was effective in controlling crown rot development in MA stored 'Embon' banana at 14 ° C even after 28 days of storage similarly to benomyl.

Therefore, packaging of "Embon" banana in low-density polyethylene bags (0.05 mm) with papaya latex treatment on cut crown surface could be recommended to increase storage life at 14°C.