# Postharvest losses in the supply chain of calamansi (x *Citrofortunella microcarpa*) and loss reduction with modified atmosphere packaging

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## Abstract

During the off-season, calamansi is sourced from Mindanao for the Metro Manila market. To reduce postharvest losses, a multi-disciplinary team sought to determine the effectiveness of modified atmosphere packaging (MAP), coupled with the curing of the fruit prior to shipment. Of the 9,422 kg of fruit harvested, only 0.6% was classified as unmarketable, but at the retail level, 13% were considered unmarketable. Postharvest disease, mainly due to *Penicillium digitatum*, was the primary cause of loss at the retail level (86%). Other losses were attributed to plugging (6%), yellowing (4%) and browning (4%). Packaging cured calamansi in 20 kg crates with a polyethylene bag (0.038 mm thick with 160 diffusion holes) increased the amount of marketable fruit from 68% (no curing, no MAP) to 95% (cured, with MAP). Furthermore, MAP of cured calamansi reduced moisture loss during transport from 5% to 0%.