

**IMPLEMENTASI PENELITIAN PENANGANAN PASCA PANEN  
MANGGIS UNTUK Mendukung PROGRAM "INTEGRATED SUPPLY  
CHAIN MANAGEMENT OF EXOTIC FRUITS FROM THE ASEAN REGION"**

(Research Implementation of Post Harvest Handling for Mangosteen  
to Support "Integrated Supply Chain Management of Exotic Fruits  
from the ASEAN Region" Program)

**Sutrisno, Emmy Darmawati, Y.Aris Purwanto**  
Dep. Teknik Pertanian, Fakultas Teknologi Pertanian IPB

**ABSTRAK**

Penurunan kualitas buah manggis untuk tujuan ekspor terjadi pada tahap transportasi dari sentra produksi ke pelabuhan dan selama pengangkutan kontainer yang berpendingin menuju negara tujuan. Untuk itu perlu adanya metode penanganan pasca panen yang baik untuk mempertahankan mutu buah manggis selama pengangkutan. Studi ini mengkaji teknik penanganan pasca panen buah manggis dalam rangka peningkatan mutu sesuai standar ekspor, khususnya untuk pasar Uni-Eropa. Secara khusus studi difokuskan pada kajian teknologi untuk memperpanjang umur simpan (*shelf-life*) dan mempertahankan mutu kesegaran (*freshness*) manggis sesuai dengan standar mutu konsumen Uni-Eropa serta desain pengemasan untuk transportasi. Hasil penelitian menunjukkan bahwa kerusakan mekanis penggunaan peti kayu dan keranjang plastik bersekat styrofoam adalah 5.2% dan 3.57%. Perubahan kekerasan terjadi secara signifikan pada perlakuan jenis kemasan setelah penyimpanan 18 hari dengan perubahan terkecil pada penyimpanan 13°C. Perlakuan pelilinan 5% dan suhu simpan 8°C dapat mempertahankan mutu buah manggis hingga 38 hari. Sedangkan pemberian sitokinin 20% dan penyimpanan pada suhu 8°C dapat mempertahankan kesegaran cupat buah selama 28 hari. Kemasan kapasitas 8 kg mampu menahan beban pada arah vertikal sebesar 204 kgf dan 256 kgf untuk kapasitas 15 kg. Secara keseluruhan kemasan berkapasitas 8 kg, berukuran 39.4 cm x 21 cm x 21 cm dengan pola *face centered cubic*) merupakan desain kemasan yang optimal untuk transportasi buah manggis.

Kata kunci: Manggis, kerusakan mekanis, pelilinan, pengemasan, transportasi.

**ABSTRACT**

The changes of the quality of mangosteen for export are mainly occurred during transportation process from production centre to the port and during long distance transportation using refrigerated container to the destination country. So, understanding the good post-harvest handling during this transportation process is needed in order to maintain the quality of mangosteen. This study explored the good post-harvest handling method of mangosteen during transportation in order to maintain the quality which meets with the quality standard for export, especially to Union-Europe market. The study was focused to investigate the storage method to extend the shelf-life of mangosteen and to design the transportation packaging. The results shows that the percentage of mechanical damage for wood packaging and basket of plastic with styrofoam partition were 5.2% and 3.57%. The hardness changes of mangosteen were significantly different for both packaging types after 18 days storage with the smallest changes occurred for 13°C. Waxing of 5% and 8°C were able to maintain the quality of mangosteens during 38 days of storage. Cytokinins coating of 20% and the storage temperature of 8°C could maintain the freshness of mangosteen during 28 days. From the design of packaging, it was obtained that 8 kg capacity of packaging could keep the vertical load of 204 kg and 256 kg for the capacity of 15 kg. The packaging capacity of 8 kg with dimension of 39.4 cm x 21 cm x 21 cm and *face centered cubic*) pattern resulted the optimal design of the transportation packaging of mangosteen.

Keywords : Mangosteen, mechanical damage, waxing, packaging, transportation.