Postharvest Handling of Minor Tropical Fruit

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General Characteristics of Fresh Fruit, Vegetables & Flowers

- Living Tissue
- High Water Content
- Subject to Pathogens
- Diverse - Morphological Structure
  - Composition
  - Physiology
Postharvest Concerns

- Reduce losses
- Ensure consistency of supply
  - Volume & quality
- Quality
  - Nutritional Value
  - Safety - Microbial
Postharvest Losses

- Mechanical Injury
- Disease
- Poor Handling & Storage Conditions
  - Low and high temperatures
  - Storage atmospheres
  - Relative humidity
  - Ethylene
  - Duration
Mechanical Injuries

Types
- Impact Bruises
- Compression Bruises
- Vibration / Abrasion Bruises

Source
- Preharvest
- Harvest
- Handling
Papaya Mechanical Injury

Color Break → Fruit Fly Egg Lay → Edible

Abrasions Damage

Impact Injury

Cuts & Scratches
Current Sources of Information

USDA Handbook #66

Sections on:

<table>
<thead>
<tr>
<th></th>
<th>Litchi</th>
<th>Pineapple</th>
<th>Star Apple</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banana and Plantain</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breadfruit</td>
<td>Longan</td>
<td>Prickly Pear</td>
<td>White Sapote</td>
</tr>
<tr>
<td>Carambola</td>
<td>Longkong</td>
<td>Rambutan</td>
<td>Tamarillo</td>
</tr>
<tr>
<td>Cherimoya</td>
<td>Loquat</td>
<td>Black sapote</td>
<td>Tamarind</td>
</tr>
<tr>
<td>Coconut</td>
<td>Mango</td>
<td>Lucuma</td>
<td>Tomatillo</td>
</tr>
<tr>
<td>Dragon Fruit</td>
<td>Mangosteen</td>
<td>Mamey Apple</td>
<td>Wax apple</td>
</tr>
<tr>
<td>Durian</td>
<td>Papaya</td>
<td>Sapodilla</td>
<td></td>
</tr>
<tr>
<td>Guava</td>
<td>Passionfruit</td>
<td>Sapote</td>
<td></td>
</tr>
</tbody>
</table>
Updated Version CTAHR Website

CTAHR Fruit, Nut and Beverage Crops—additional brochures


<table>
<thead>
<tr>
<th>Atemoya</th>
<th>Jackfruit</th>
<th>Papaya Maturity Chart</th>
<th>Soursop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Longkong, Duku, and Langsat</td>
<td>Jaboticaba</td>
<td>Rollina</td>
<td></td>
</tr>
</tbody>
</table>

Harvest and Postharvest Tips for Better Quality and Longer Postharvest Life

[F_N-36] [2014]

Quick Harvest and Postharvest Tips for Better Quality and Longer Postharvest Life

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²Tropical Plant and Soil Sciences, University of Hawai‘i at Manoa, Honolulu, Hawai‘i

Abiu
_Pouteria caimito_
Abiu fruit are harvested when they become bright yellow, and the fruit continue to ripen after harvest. Full ripening occurs in 1 to 5 days after harvest, when the fruit pulp no longer has a sticky latex. The translucent flesh becomes jelly-like, with a pleasant, somewhat caramel-flavored pulp. The tough, leathery skin can be easily bruised, but if handled carefully the fruit has a good postharvest life. The flesh browns quickly after slicing, and the fruit is usually prepared just before eating.

Acerola
_Malpighia emarginata_
Acerola is extremely fragile and must be harvested gently. Generally, acerola should be picked when almost fully red. Fruit are often field-packed into clamshell plastic containers, no more than two layers deep. A third layer often puts too much weight on the bottom fruit. The clamshell should be placed in a pre-chilled cooler in the field to reduce the temperature of the fruit as quickly as possible. With rapid cooling, the postharvest life can be increased from about 4 to 10 days. Fruit with a longer postharvest life are more desirable to grocery stores and chefs and enhance your reputation for high-quality fruit.
<table>
<thead>
<tr>
<th>Fruit</th>
<th>Storage Temperature</th>
<th>Rel Humidity</th>
<th>Postharvest Life (days)</th>
<th>Ethylene Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abiu</td>
<td>54oF (12oC)</td>
<td>90%</td>
<td>7 days</td>
<td></td>
</tr>
<tr>
<td>Acerola</td>
<td>32oF (0oC)</td>
<td>85–95%</td>
<td>40–50 days</td>
<td></td>
</tr>
<tr>
<td>Atemoya / Cherimoya</td>
<td>54oF (12oC)</td>
<td>90%</td>
<td>14–21 days</td>
<td>Sensitive</td>
</tr>
<tr>
<td>Bilimbi</td>
<td>50oF (10oC)</td>
<td>90%</td>
<td>9 days</td>
<td></td>
</tr>
<tr>
<td>Dragon Fruit</td>
<td>57oF (14oC)</td>
<td>90–95%</td>
<td>14 days</td>
<td>Low</td>
</tr>
<tr>
<td>Durian</td>
<td>39–43oF (4–6oC)</td>
<td>90–95%</td>
<td>40 days</td>
<td></td>
</tr>
<tr>
<td>Jackfruit</td>
<td>55oF (13oC)</td>
<td>90–95%</td>
<td>7–14 days</td>
<td>Very low</td>
</tr>
<tr>
<td>Mangosteen</td>
<td>39–43oF (4–6oC)</td>
<td>85–90%</td>
<td>5oC 90%, 40 days</td>
<td>Very low</td>
</tr>
<tr>
<td>Pummelo</td>
<td>54–59oF (12–15oC)</td>
<td>90–95%</td>
<td>80 days</td>
<td>Low</td>
</tr>
<tr>
<td>Salak / Snake Fruit</td>
<td>59oF (15oC)</td>
<td>90–95%</td>
<td>25 days</td>
<td></td>
</tr>
<tr>
<td>Sapodilla (Chiku)</td>
<td>57–59oF (14–15oC)</td>
<td>90–95%</td>
<td>14–21 days</td>
<td>Sensitive</td>
</tr>
<tr>
<td>Sugar Apple</td>
<td>50oF (10oC)</td>
<td>90–95%</td>
<td>7–14 days</td>
<td>Sensitive</td>
</tr>
<tr>
<td>White Sapote</td>
<td>68oF (20oC)</td>
<td>85–90%</td>
<td>14–21 days</td>
<td></td>
</tr>
</tbody>
</table>
Keys to Success

- Initial Quality
- Maturity at Harvest
- Careful Handling
- Proper Environment
  - Temperature
  - Relative Humidity
  - Atmosphere
- Sanitation
Thank you

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