Development initiatives on mango quality and marketing in Thailand

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Overview

- Variety and Region of growing
- Production Process
- Postharvest Process
- Marketing and Branding
- Quality assurance measures
Variety and Region of growing

- 305,000 ha of mangoes in 2008.
- 2.3 million tones of fruit.
- 12, 22, 9 and 9 million dollar for fresh, canned, dried and frozen mango respectively.
- Nam Dok Mai No.4, Nam Dok Mai Si Thong and Mahachanok are the main variety.
- The main production area is spread throughout the country.

- Linking area approach are used to make a production plan starting from central, northeastern, northern and southern respectively.
Most of the fruit is sold in the main domestic markets but about 2% is exported overseas.

Mainly to Singapore, Malaysia, China, Japan, South Korea and EU.
Commercial variety
Production Process
Central region

Bed system
Ridge-and-furrow configuration
Northern region

Nearby the foot-hill zone
Northern region

Highland areas
Northeastern region

Rain shadow
Dwarf tree
Tip pruning
Synchronization

- Allows all of the stems in the canopy to be in the same physiological stage of maturity.

- Tip pruning causes a uniform flush of growth throughout the canopy.

- Removes growth – and flower – inhibiting factors in stems derived from the previous season’s flowering and fruiting panicles.

- Tip pruning also stimulates lateral shoot development forming 5 to 10 times the original number of productive stems.
Considerations for the flowering program

- Harvest of the previous season’s crop
- Timing of the dry and wet seasons
- High susceptibility of flowers and fruit to disease during rainy seasons
Thinning
allows each remaining fruit to develop to its maximum size.

fruit thinning also reduces alternate bearing.
Bagging
- Bagging are used to prevent laying egg from oriental fruit fly.

- There are two types of bag. One is carbon bag, another is white bag.

- Should be done at about 45 days after fruit set or after natural thinning or dropping when the mangoes are about the size of a chicken egg.
Increasing yield

Mango shoots were grafted onto the mother plant to increase yield.
Postharvest Process
Grading

- Mangoes are typically graded into various classes that are distinguished by the levels of minor defects on the fruit.

- An allowance is the amount of defect allowed on a piece of fruit not more than 5%, 10%, and more than 10% for class A, B, and C respectively.
### Packing

<table>
<thead>
<tr>
<th>SIZE</th>
<th>WEIGHT IN GRAMS</th>
</tr>
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<tbody>
<tr>
<td>X L</td>
<td>380-450</td>
</tr>
<tr>
<td>Large</td>
<td>330-379</td>
</tr>
<tr>
<td>Medium</td>
<td>280-329</td>
</tr>
<tr>
<td>Small</td>
<td>250-279</td>
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</tbody>
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- Individual packing
- 2, 3, 5 and 10 kilogram per box
Storage conditions

Fruits are stored at 13°C throughout the cool chain.
The temperature between 18 to 22ºC stimulus the ripening.
Marketing and Branding

- The fresh fruit marketing system is increasingly focused on adding value and decreasing costs.

- There needs to be a commitment to reform production processes throughout the supply chain.

- Focus on branding would add value to mango exports.
Brand loyalty consists of a consumer's commitment to repurchase products or services.
Branding for Thai mango; Mango Talk

- True to type shape
- Very good taste and smell
- Fresh produce
- Enrich in nutrition and vitamins
- Good packaging design
- Reasonable price
Quality assurance measures

The traceability system is the first step in ensuring an effective food safety quality program.
Aspects of farm management such as the following should be closely monitored:

- Sources of seeds and seedlings
- Pests and weed elimination
- Pesticide application
- Dates and amounts of fertilization
- Harvesting or post-harvesting treatment
- Basic information regarding the individual farmer
A traceability system is vital to ensure the accuracy of all information from farm to table.

Important aspect

- Agrochemical residues
- Hygiene
- Pest control
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