International Symposium on Superfruits

Myth or Truth?

Production and expansion of the Export market for Papaya in Asia and the Pacific

Ho Chi Minh City, Vietnam
1-3 July, 2013
Introduction to Fiji

- Lies 18 degrees South and 175 degrees East. It lies between Samoa and Australia, and due north of New Zealand.
- Small, relatively isolated country, yet it has been able to provide its population with a reasonable standard of living.
- Total land area of approximately 18,274 km$^2$ made up of some 300 islands (110 uninhabited. The two largest islands (Viti Levu and Vanua Levu) together, comprise 88 percent of the total land area.

Source: http://www.lonelyplanet.com/maps/
Approximately 10.9% of the land is suitable for arable agriculture.

Further 43% of the land can be used for tree cropping and grazing.

Climatic extremes in the form of hurricanes and floods, and more insidiously drought.

Climatic extremes have far-reaching impacts on land-use patterns. There have been around 136 cyclones recorded in the Fiji group over the last 120 years.

The worst drought of the century occurred in 1997/98.

Fiji’s population is about 890,057, with indigenous Fijians making up about 51%. Indo-Fijians (mainly the descendants of indentured laborers brought to work on the sugarcane plantations), account for some 44% of the population.

The population growth rate is less than 1% per annum.

Decline in the rural population has been greatest in the outer islands and sugarcane areas. Fiji is rapidly evolving from an agrarian to a semi-urban society, with almost half the population living in urban or peri-urban areas.
PAWPAW PRODUCTION IN FIJI

• Papaya for export mainly grown on the Western side of the main island of Viti Levu
• Export varieties Sunrise Solo and Waimanalo SoloSunrise – seeds introduced from University of Hawaii
• “Fiji Red” Papaya
• January & March 2012 flooding destroyed most of the papaya farms – rehabilitation
• Fiji Papaya project (FPP) works with 11 registered farmers to produce ‘Fiji Red Papaya seeds (15 acres)
• Natures Way Cooperatives provides seedlings, inputs, and advice in return for access to 10% of the best trees in a papaya block for FPP to carry out its selection, bagging & fruit selection
• MOA provides auditing and certification to the seed producers
• Seedlings also raised at the Research Station and distributed to farmers
• Small holder farms (1-2 acres), farmer groups (13)
• Production badly affected by floods in early 2012
Nature’s Way Cooperative Fiji Papaya Project

“Fiji Papaya Project”, applied research project aimed at improving the competitiveness of the papaya industry for its members

- Private sector-led project funded by ACIAR in co-operation with the MOA, Natures Way Cooperatives and SPC
- 3rd International Papaya Symposium: “The Economics of Organic Papaya Production in Fiji and Optimizing Sea Freight Fiji Papaya
- Seed production
- Fruit quality assessments to quantify quality issues
- Post harvest issues

Photo credits: Fiji Papaya Project
PAWPAW PRODUCTION (TONNES)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>PRODUCTION (Tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>2,446</td>
</tr>
<tr>
<td>2010</td>
<td>2,190</td>
</tr>
<tr>
<td>2011</td>
<td>3,064.75</td>
</tr>
<tr>
<td>2012</td>
<td>2,970.80</td>
</tr>
</tbody>
</table>

Papaya Export (2011) Volume (kg)

- Australia: 628,194 kg
- Canada: 376,186 kg
- Hong Kong: 36,485 kg
- Japan: 14,516 kg
- Nauru: 901 kg
- New Zealand: 10,000 kg
- New Zealand: 550 kg
- United States: 4,270 kg
- Tuvalu: 4,270 kg
- United States: 4,270 kg
PAPAYA EXPORT

• Export fresh papaya (*Carica Papaya*) fruit to NZ & Australia, Japan, Hong Kong, Netherlands (2011), Canada, Namibia (2011), Nauru & Tuvalu
• Record 1300 tonnes papaya exported in 2011
• Papaya is a fruit fly host
• Bilateral Quarantine Agreement between Fiji, Australia and New Zealand
• High Temperature Forced Air (HTFA) quarantine treatment facility at Fiji’s international airport operated by Natures Way Cooperatives: Gateway for export markets for horticultural products
  • Papaya to Australia, Japan and New Zealand
  • Export dramatically decreased in 2012 -2013 due to floods in 2012

Photo credits: Nature’s Way Co-operative, Fiji.
Pawpaw Export Pathway to New Zealand

1. Components of the system
   - On farm production
   - Filed Control Measures
2. Exporter/packhouse
   - Licensing
   - Packhouse/Fiji Quarantine inspection
3. High temperature Forced Air (HTFA) Treatment Chamber
4. Phyto-sanitary Certificate
5. Fiji DOA Audit
6. Contingency Plan – Within Fiji
7. Inspection on arrival in New Zealand
   - Bio-security/Quarantine Directive
   - Testing for regulated pests
   - Actions taken on interception/detection of organisms/contaminants
   - Bio-security Clearances
   - Feedback on non-compliance
### 2010 Papaya Export

<table>
<thead>
<tr>
<th>Countries</th>
<th>Export ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>571,940</td>
</tr>
<tr>
<td>Canada</td>
<td>65</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>27,280</td>
</tr>
<tr>
<td>Japan</td>
<td>24,351</td>
</tr>
<tr>
<td>Namibia</td>
<td>13,393</td>
</tr>
<tr>
<td>Netherlands</td>
<td>9,620</td>
</tr>
<tr>
<td>Nauru</td>
<td>163</td>
</tr>
<tr>
<td>New Zealand</td>
<td>834,437</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,481,249</strong></td>
</tr>
</tbody>
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### 2010 Papaya Export Earning ($)

![Pie chart showing export earnings as percentages.]

- Australia: 571,940
- Canada: 65
- Hong Kong: 27,280
- Japan: 24,351
- Namibia: 13,393
- Netherlands: 9,620
- Nauru: 163
- New Zealand: 834,437
- **Total**: 1,481,249

### 2011 Papaya Export Earnings

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<th>Countries</th>
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<tbody>
<tr>
<td>Australia</td>
<td>2,950,725</td>
</tr>
<tr>
<td>Canada</td>
<td>392</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>171,596</td>
</tr>
<tr>
<td>Japan</td>
<td>88,726</td>
</tr>
<tr>
<td>Nauru</td>
<td>482</td>
</tr>
<tr>
<td>New Zealand</td>
<td>815,956</td>
</tr>
<tr>
<td>Tuvalu</td>
<td>150</td>
</tr>
<tr>
<td><strong>USA</strong></td>
<td><strong>2,526</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,030,553</strong></td>
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- Canada: 392
- Hong Kong: 171,596
- Japan: 88,726
- Nauru: 482
- New Zealand: 815,956
- Tuvalu: 150
- **Total**: 4,030,553
• Papaya industry badly affected by the early 2012 floods and cyclone
• Incursion of Disease thought to be Crown Rot
• Rehabilitation program put in place;
  ➢ Seed production
  ➢ Extend area of production
Challenges

• Natural disasters – floods, cyclones
• Seeds and planting material
• Post-harvest losses
• Reduction in available freight capacity in airlines particularly to Australia
• Land issues
• Pests and Diseases
• Market access issues
THANK YOU & VINAKA VAKA LEVU