Unique Foods of the Pacific: The Pacific Island Food Composition Tables

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Setting the Scene

- South Pacific region 12 countries
- Population range 1,200 – 1,000,000
- High volcanic islands and coral atolls
- Large number of endemic species and unique foods, especially green leaves, nuts and some fruits
- Multiple cultivars of taro, cassava, bananas, yams, sweet potatoes, breadfruit
- Asian dietary influence, now Western
History of Pacific Food Composition Tables

1950s  Analysis by SPC (South Pacific Commission)
1960s  Fiji School of Medicine
        “Food Compositional Tables for use in the South Pacific” – 200 foods, borrowed values
1970s  Concern about NCD increase
1980s  Tables reprinted – work on new table
    7    Publication of First Edition of “Pacific Island Food Composition Tables”
2004  Publication of Second Edition
Characteristics of Pacific Food Tables

• Over 1,000 foods
• About 150 locally analyzed
• 20 categories of food
• Mainly raw, single foods
• Energy, moisture, protein, fat, av. Carb, TDF, beta-carotene eq., retinol, ret. eq., thiamine, riboflavin, niacin, B_{12}, vit C, vit. E, cholesterol, 8 minerals
• Food Works software for diets, recipes
Uses of Data

• Food charts (starch in staples, iron and protein in green leaves, vitamin C in fruits)
• Low income diets
• Nutrient labels
• Promote superior cultivar e.g. carotenes
• Health food project – Fat in tinned meat
Nutrient Laboratory Development

- (1977-1985) proximates, minerals
- (1986-1994) carbohydrates, vitamins (USAID)
- (1994-2000) vitamins by HPLC, QA (ACIAR) local foods
- (2000-2005) international accreditation (FAO) missing foods and nutrients, contaminants
- 2005-on folates, trans fatty acids
# Examples of Green Leaves

<table>
<thead>
<tr>
<th></th>
<th>Protein (%)</th>
<th>Fe (mg/100g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>fern</td>
<td>3.4</td>
<td>4.0</td>
</tr>
<tr>
<td>taro</td>
<td>5.8</td>
<td>2.8</td>
</tr>
<tr>
<td>tropical spinach</td>
<td>3.4</td>
<td>1.5</td>
</tr>
<tr>
<td>drumstick</td>
<td>7.6</td>
<td>2.7</td>
</tr>
<tr>
<td>Eng. cabbage</td>
<td>1.3</td>
<td>0.6</td>
</tr>
<tr>
<td>Ch. cabbage</td>
<td>2.2</td>
<td>1.0</td>
</tr>
<tr>
<td>amaranth</td>
<td>3.7</td>
<td>4.9</td>
</tr>
</tbody>
</table>
## Examples of Bananas

<table>
<thead>
<tr>
<th>Variety</th>
<th>β-carotene eq. (µg/100g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utimwahs</td>
<td>8100</td>
</tr>
<tr>
<td>Karat Buchw</td>
<td>2500</td>
</tr>
<tr>
<td>Mangat</td>
<td>3612</td>
</tr>
<tr>
<td>Taiwang</td>
<td>1314</td>
</tr>
<tr>
<td>Utim Menihle</td>
<td>128</td>
</tr>
</tbody>
</table>
Cawaki (Sea urchin)
(Source: J.Seeto)
Dairo (Sea Cucumbers)
(Source: J.Seeto)
Nama
(Source: J.Seeto)
Veata
(Source: J.Seeto)
Yaga
(Source: J.Seeto)
Kuita (Octopus)
Source: J. Seeto.