Conservation of Edible Fruits in the Philippines: Status, Efforts, Gaps and Prospects

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University of the Philippines Los Baños
Edible Fruit Trees of the Philippines

Family

<table>
<thead>
<tr>
<th>Type</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endemic</td>
<td>65</td>
</tr>
<tr>
<td>Indigenous</td>
<td>164</td>
</tr>
<tr>
<td>Introduced</td>
<td>160</td>
</tr>
<tr>
<td>Naturalized</td>
<td>1</td>
</tr>
<tr>
<td>Doubtful</td>
<td>2</td>
</tr>
</tbody>
</table>

Species ~392

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
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</tr>
<tr>
<td>Doubtful</td>
<td>2</td>
</tr>
<tr>
<td>Others</td>
<td>1%</td>
</tr>
</tbody>
</table>
Contextualization of efforts: Policies for Edible Fruits PGR conservation and utilization

- IU, 1983
- CBD EIF: 1993
- E.O. 247 1995
- RA 7611 1993
- RA 8371 2001
- RA 9147 2001
- Joint DENR-DA-PCSD-NCIP AO 1, 2004
- ITPGRFA PH accession to IT: 2006
- Senate Bill (?)
- Amendment of RA 7308 (?)
- Yet to be approved
## Institutions that have Edible Fruit Conservation Efforts

<table>
<thead>
<tr>
<th>Institution</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Plant Genetic Resources Laboratory &amp; Institute of Crop Science, University of the Philippines Los Baños <em>(Ex-situ, field genebank and tissue culture)</em></td>
<td>All Fruit Crop Species (Mango, Banana, Pilinut, <em>Artocarpus</em>, other native spp.)</td>
</tr>
<tr>
<td>DA-BPI, Davao <em>(Ex-situ, field genebank)</em></td>
<td>Banana, other fruit species</td>
</tr>
<tr>
<td>DA RFO VIII, Leyte <em>(Ex-situ, field genebank)</em></td>
<td>Jackfruit and its related species</td>
</tr>
<tr>
<td>Nueva Vizcaya State University <em>(Ex-situ, field genebank)</em></td>
<td><em>Citrus</em> spp.</td>
</tr>
<tr>
<td>Philippine Coconut Authority, Zamboanga <em>(Ex-situ, field genebank)</em></td>
<td>Coconut</td>
</tr>
<tr>
<td>DA-BPI, Baguio <em>(Ex-situ, field genebank)</em></td>
<td>Sub-tropical fruits</td>
</tr>
<tr>
<td>DA-BPI, Guimaras <em>(Ex-situ, field genebank)</em></td>
<td>Mango</td>
</tr>
<tr>
<td>Western Philippines University, Palawan <em>(In-situ)</em></td>
<td><em>Nephelium</em> spp.</td>
</tr>
</tbody>
</table>
Major funding Agencies that support Phil. Edible Fruit Conservation Projects

1. Department of Science and Technology-Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (DOST-PCAARRD)

2. Department of Agriculture-Bureau of Agricultural Research (DA-BAR)

3. Department of Agriculture-Bureau of Plant Industry (DA-BPI)
Problems/Gaps

1. Lack of sustainable funding source for conservation

DOST-PCAARRD Projects Related to Fruit Genetic Resources Conservation, Management, Utilization
National Plant Genetic Resources Laboratory

- established on November 12, 1976 by Presidential Decree 1046-A
- national center in plant genetic resources activities

- Number of edible trees conserved: ~139 spp.
- Area: > 30 has. (300,000 sqm.) for fruit genetic resource

Very limited yearly budget (sourced from UPLB)
Outsourced funds through externally-funded projects
Problems/Gaps

2. Need for diversified knowledge in the biology of crops

- Identification
- Propagation and maintenance
- Pest and disease
Problems/Gaps

3. Abiotic and biotic stresses
   • Typhoon
   • Volcanic hazards
   • Climate change
   • Wide range of pest and diseases

4. Change in land use
5. Lack of resources (human, facilities)
Problems/Gaps (amidst pandemic)

- Limited/restrict access to crop orchards
- Reduced activities: characterization, monitoring, evaluation, propagation (general field operations)
- Security: encroachment in field genebanks, stolen produce
Prospects: Edible Fruit Trees of the Philippines

- Guava (Psidium guajava)
- Katmon Kalabaw (Dillenia reifferscheidia)
- Katmon (Dillenia philippinensis)
- Hunggo
- Batuan (Gnetum gnemon)
- Bago (Gnetum gnemon)
- (Syzygium mananquil)
- Bignay (Antidesma bunius)
- Lipote (Syzygium polycepaloides)
- Kayape-Uway (Calamus ornatus)
- Mabolo (Diospyros blancoi)
- Rimas (Artocarpus altilis)
- Marang (Artocarpus odoratissimus)
- Pili Magnaye (Canarium ovatum)
- Tagbak
Thank you.

Acknowledgements:
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Emmanuel Bonifacio S. Timog
Prof. Teresita H. Borromeo