Reconnecting to Pacific Island breadfruit agroforestry landscapes

Rising Voices
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We have not been stewarding lands for sustainable environmental, cultural, and human health.

Track record 200 years

- Land and water degradation
- Food insecurity
- Reduced land access
- Public unawareness
We have not been stewarding lands for sustainable environmental, cultural, and human health.

Kahului

Hamakua

Holualoa

‘Upolu, Samoa
Lanaʻi City
Lanaʻi City
Multistory Agroforestry
Multistory agroforest

Low input
Captures nutrients
Pest and disease resistant
Multiple crops
Environmental services
Resilient

<table>
<thead>
<tr>
<th>Crop</th>
<th>Estimated yield of one plant (personal nutrition-days/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breadfruit</td>
<td>60–188</td>
</tr>
<tr>
<td>Banana</td>
<td>15</td>
</tr>
<tr>
<td>Coconut</td>
<td>44 (from kernel)</td>
</tr>
<tr>
<td>Understory of taro, cassava, yam, sweetpotato, etc.</td>
<td>Substantial addition</td>
</tr>
<tr>
<td>Total</td>
<td>119–247</td>
</tr>
</tbody>
</table>

Yields source: Specialty Crops of Pacific Islands (2011)
“Lived-in” environments
connected to cultural, human health
Abundant, sustainable
Economic diversity

35 ft diameter homegarden agroforest
"Lived-in" environments
Connected to cultural, human health
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homegarden agroforest

PAʻauilo, Hawaiʻi
Biological growth

\[ y'(t) = ky(t)^p e^{-qt} \]

[sigmoidal form]

\( t = \text{time, } k, p, q \text{ positive parameters} \)

(Zeide 1993)
Lifestyle shift
• "Lived-in" environments
• Connected to cultural, human health
• Abundant, sustainable
• Economic diversity

I ke alo no ka ʻulu a hala.
The breadfruit was just in front and it was missed.