

# Species Profiles for Pacific Island Agroforestry

*Craig Elevitch (Hawai'i – Professional Development Program Grant)*

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**Title:** Species Profiles for Pacific Island Agroforestry

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Craig Elevitch at a demonstration Stewardship Forest planted near the entrance to Permanent Agriculture Resources in Hōlualoa, Hawai'i.

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**Summary:**

Agroforestry is a vital aspect of sustainable agriculture in the tropics, and producers increasingly seek tree species for use in crop diversification, windbreaks, coastal protection, shade, soil improvement, water conservation, livestock fodder, woodlots and other applications. This project produced a series of 10- to 32-page fact sheets for 83 of the most important agroforestry species in the region. Each fact sheet provides information on products, uses, interplanting applications, environmental requirements, propagation methods and cultivation techniques.



Noni is an example of a native tree with a long tradition of Pacific island use that also has proved to have high export potential. Kona, Hawai'i ©

**Objectives:**

1. To strengthen NRCS and CES agent understanding of and proficiency in Pacific island tree species and their products and uses;
2. To meet the defined needs of NRCS, extension, and other agricultural professionals by creating concise, practical, user-friendly species profiles (8- to 16-page fact sheets) for 50 outstanding Pacific island agroforestry species;
3. To produce selection tables of the 50 species sorted by associated crops, agroforestry uses/products (i.e., windbreak, timber, fruit) and five climatic zones;
4. To distribute a searchable CD with live Internet links and a reproducible, bound and printed set of the species profiles and selection tables to 50 NRCS, CES, and other agricultural organizations in the American-affiliated Pacific islands;
5. To publish the species profiles on the Internet ([www.agroforestry.net](http://www.agroforestry.net)) for viewing in HTML (using a web browser) and downloading in PDF format (for reading with the free Acrobat Reader) for at least a three-year period;
6. To assess the effectiveness and benefits of above objectives by conducting a follow-up survey of recipients three months after distribution of the completed species profiles.



Cultural values of Pacific island trees are often as important as material values. Cultural festival at Pu'uhoua o Hōnaunau with coconut and noni trees growing in background. Kona, Hawai'i ©

**Publications and outreach:**

A total of 47 species profiles covering 83 species (849 pages in sum) were published to the project website, <http://traditionaltree.org>. CDs containing the species profiles were distributed to 140 NRCS, Cooperative Extension, state forestry, and numerous other offices throughout the Pacific islands.

Species profiles published to <http://traditionaltree.org>

- Acacia koa* (and *A. koaia*)
- Aleurites moluccana*
- Alphitonia zizyphoides*
- Artocarpus altilis*
- Artocarpus camansi*
- Artocarpus mariannensis*
- Barringtonia procera*
- Broussonetia papyrifera*
- Bruguiera gymnorhiza*
- Calophyllum inophyllum*
- Cananga odorata*
- Canarium indicum* (and *C. harveyi*)
- Casuarina equisetifolia* (and *C. cunninghamiana*)
- Citrus species
- Cocos nucifera*
- Cordia subcordata*
- Endospermum medullosum*
- Erythrina variegata*
- Fagraea berteriana*
- Flueggea flexuosa*
- Glicicidia sepium*
- Inocarpus fagifer*
- Intsia bijuga*
- Mangifera indica*
- Metroxylon* species
- Metrosideros polymorpha*
- Morinda citrifolia*
- Musa* species
- Pometia pinnata*
- Prerocarpus indicus*
- Rhizophora mangle* (and *R. samoensis*, *R. racemosa*, *R. x harrisonii*)
- Rhizophora apiculata* (and *R. mucronata*, *R. stylosa*, *R. x annamalai*, *R. x lamarkii*)
- Samanea saman*
- Santalum yasi* (and *S. austrocaledonicum*)
- Santalum ellipticum* (and *S. freycinetianum*, *S. haleakalae*, *S. paniculatum*)
- Syzygium malaccense*
- Terminalia catappa*
- Terminalia richii*
- Thespesia populnea*
- Tournefortia argentea*



Traditional Pacific Island home gardens provide food, medicine, and crafts and building materials. The project promoted the value of biodiverse home gardens. This Samoan home garden includes banana, cacao, coconut, and several other fruit and timber species. Upolu, Samoa ©

**Dissemination:**

During the period January 2005 to August 2007, more than one million hits on species profiles were posted to the project website. During August 2007 there were 52,000 web hits on species profiles, indicating the current rate of dissemination. The species profiles will be available for download for at least three years from January 2006 (date of project completion) at <http://traditionaltree.org>.



Crop mixtures such as banana, betel nut and noni, as shown here, have both local demand and export markets. By growing multiple crops together, the system is more resistant to environmental and economic pressures. Palau ©



Each species profile included detailed information on plant propagation. Glicicidia seedlings grown by the Department of Forestry, Guam ©