

Needs and Priorities in Agroforestry Research in the Pacific¹

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Abstract: This paper summarizes a longer presentation of research needs identified by two working groups commissioned by the Land Grant Colleges of the Pacific. Major discussion points by the workshop participants are also summarized.

ADAP (Agricultural Development in the American Pacific) is a regional project initiated in mid-1987 by the Directors of Land-Grant Colleges in the American Pacific—American Samoa Community College, University of Guam, University of Hawaii, College of Micronesia, and Northern Marianas College. The effort is supported by special funding from the U.S. Congress through the U.S. Department of Agriculture. Although initially designed to develop agriculture in the American Pacific, including faculty, staff and institutions, the Directors also expressed interest in forestry and its relationship to agriculture on the islands.

Forests, including natural stands, plantations, and traditional agroforests, are important resources on the islands. The percent of land containing some type of tree cover, including agroforests, varies from a low of 66 percent on Yap to a high of 92 percent on American Samoa. Traditionally, subsistence agriculture has been closely associated with individual trees, forest products, and the larger natural stands of forests covering upland watersheds and the coastal mangroves. As agriculture develops, the needs and opportunities to manage and protect these forest lands also must be considered in the total island complex.

The ADAP Forestry Advisory Committee

In 1989, the Directors established an *ad hoc* Forestry Advisory Committee to consider tropical forestry needs in research, extension, and education, and to recommend actions appropriate for the Land-Grant Colleges. The committee consisted of representatives from the five land-grant colleges of the American Pacific, several federal and state agencies, and the East-West Center. All had experience living or working in the Pacific Islands. The committee had for its deliberations agency background reports, notes, and direct comments from forestry and natural resources specialists on the many islands.

The committee developed a list of 24 major forestry research, education, and extension needs for the American Pacific Islands.³ These were divided into three main priority groups. The five highest priority needs were:

1. Professional and technical education
2. Agroforestry research and extension
3. Environmental education
4. Watershed management research and extension
5. Staff development and training

These five were then considered in additional detail, with additional suggestions on program studies and possible sources of support.

In addition to the listing of needs and priorities, the committee specifically recommended that the Directors establish a formal agroforestry task force within the ADAP program structure to follow-up on and further develop recommendations in their report.

The ADAP Agroforestry Task Force

Acting on the recommendations, the Land-Grant Directors approved and established an agroforestry task force as one of the six task forces operating in ADAP. The task force is made up of a Land-Grant faculty or staff person from each college and a counterpart representing a nearby forestry or agriculture agency. The USDA Forest Service and the East-West Center also participate. The purpose of this larger representation of local and regional agency people was to encourage cooperative efforts at the local and regional levels as well as to add important expertise to the group.

The first task force meeting, held in November 1989, developed a number of pre-proposals for high priority projects in agroforestry education-extension-training, and research for the Pacific region. Those of highest priority in research were to:

1. Conduct a workshop to evaluate and further develop agroforestry research methodologies with local scientists
2. Document indigenous Pacific Agroforestry systems

In total, the task force reviewed and ranked a dozen proposals in agroforestry.

Research Proposals

- Agroforestry research methods workshop
- Document indigenous agroforestry systems in the Pacific
- Evaluate agroforestry site characteristics and develop recommendations for establishment of future agroforests.
- A study to maximize yields from alley cropping
- Develop methods to reclaim badlands
- Collection, evaluation, and maintenance of germplasm
- Study multipurpose tree species response to fertilization on poor, acid soils

¹ An abbreviated version of this paper was presented at the Workshop on Research Methodologies and Applications for Pacific Island Agroforestry, July 16-20, 1990, Kolonia, Pohnpei, Federated States of Micronesia.

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³ Bay, Roger R. Tropical forestry research, education, and extension needs in the American Pacific. Report submitted to the American Pacific Land Grant Directors, July 1989. Available from the College of Tropical Agriculture and Human Resources, University of Hawaii, 96822.

Education and Extension

- Train college staff in agroforestry principles
- Train extension agents to improve basic skills from communications to agroforestry practices
- Improve overall knowledge and operations of current agroforestry organization and practices
- Extend environmental education to decision-makers and landowners
- Develop environmental education programs for K- 12 students and teachers

This workshop in Pohnpei is the direct result of their highest priority recommendation, supported by funding from the ADAP Land-Grant Directors. The task force intends to encourage proposals from the staff at the Pacific Land Grant Colleges to address additional priority needs.

Workshop Discussion on Agroforestry Research

The following paragraphs are summaries of comments and discussions by workshop participants made during a general discussion period:

- Needs in conservation education for grades K through 12 should involve the Departments of Education of the various island governments. Training of teachers in the use of various modules is needed. Materials relating to forestry and conservation also should be translated into local languages. Some international organizations may have funds for case studies, posters, etc.
- There is a need to re-orient agencies and others to place agroforestry higher on the priority list for all islands. Institutional priorities should be redirected, and we should be fostering a mental-social change in how people view agroforestry.

- Local farmers should be brought into the priority-setting process. They know their system and local conditions. Their traditional knowledge needs to be coordinated with the structured knowledge of scientists. Other local people from forestry and agriculture agencies should identify their needs.

- More funding and more people are needed on most islands to address local problems in agroforestry. Current limited staffs are sometimes consumed by many meetings and frequent visitors. Effort must be made to allocate limited funds to lower levels for direct project work.

- There is a problem obtaining input from local agencies and people on their needs or priorities.

- Each state should appropriate some funds so colleges can match with cooperative funds of their own to meet local needs in that state. Some legislators believe earlier research has not been summarized and is not available.

- Task force members should be responsible for documenting trees and other plants on their islands before varieties and even species are lost. Medicinal plants are also important to document.

- Some believe there is a desire for diversity by local farmers in agroforestry - new plants for new foods on the islands. An Agroforestry Development Center in Micronesia should be considered.

- Agroforestry responsibility falls between agriculture and forestry agencies. Some agency needs to be responsible. Counterparts between agencies are needed.

- Who will be able to do the needed research? Commitments from agencies and local people to help scientists with projects are needed.

- Adaptation of indigenous systems in agroforestry is very important. We do not necessarily have to search for or develop completely new systems.