

PACIFIKA IMPROVED AND INTEGRATED FARMING SYSTEMS

Income generation and a better environment from enriched and stabilised mixed crop farming

A Policy Briefing for Governments and Development Agencies in the Pacific Region
An output from a regional agroforestry workshop on ensuring food security and better livelihoods for Pacific people

The Problem—Because of increasing pressures for land in most Pacific island countries, shifting agriculture is no longer a sustainable form of land use. The needs of farmers have changed and shifting cultivation no longer meets the needs of farmers for food security and income generation. Most importantly, the shortened fallow periods no longer restore soil fertility and shifting agriculture is now damaging the environment.

Are intensive, 'high-input' monocultures the best alternative? Evidence from around the world indicates that in the tropics the answer is 'No'. After a period of high productivity, wide-scale monocultures frequently suffer an ecological 'crash', with pests and diseases destroying farmers' livelihoods and market opportunities. Additionally, agrichemicals pollute waterways, soil is washed away, and traditional social structures are weakened.



As farmers shift to sloping lands, a downward cycle of land degradation takes place.



Intensive monocultures have proven to be unsustainable in the Pacific region.

The Facts—Traditional mixed cropping systems have many advantages. The benefits include:

- Diversity provides resilience and risk aversion from environmental and market failures
- Low input expenditures maximize economic returns
- Ecosystem services are protected and harnessed to maximize nutrient and water use efficiency, as well as to sustain the natural food chains and life cycles that regulate pests and diseases
- The integrated mixture of traditional food crops with tree crops in a permanent and profitable production system (agroforest)
- Opportunities for a diverse 'portfolio' of natural resource investments in a mixture of crops meeting domestic and market needs
- Opportunities for inclusion of speciality crops for 'niche' markets as well as the staple foods
- Perennial crops, especially trees for timber and indigenous fruits and nuts ('Agroforestry Tree Products'), provide a 'bank account' for the next generation
- Suitable for marginal land and protection of hillsides and water catchments
- Close affinity with culture and existing lifestyles while allowing economic advancement and enhanced livelihoods



Pacifika Improved and Integrated Farming Systems are locally appropriate and therefore they can provide food and materials that foster native culture and healthy diets, as well as commercial products.

What are Pacifika Improved and Integrated Farming Systems?

This name was accepted at a regional workshop at IRETA, USP, Alafua, Samoa in September 2005 to describe the range of mixed cropping systems found in the Pacific islands that enhance sustainability and ecological stability by including a mixture of trees and other crops. This enrichment of traditional crops with trees improves overall profitability, maximizes productivity, creates opportunities for innovation and maximises environmental services. Thus this form of mixed cropping provides a landuse that combines traditional approaches to farming with modern agroforestry science as an alternative to shifting agriculture.



Many indigenous trees of the Pacific have cultural value and commercial potential that can be developed by domestication, appropriate processing and value-adding technologies (shown here, canarium nuts).



New crops can be developed from indigenous plants through farmer-guided and market-driven tree improvement (shown here, cutnut).



Pacifika Improved and Integrated Farming Systems tend to have fewer pest and disease problems, reducing losses and the need for pesticides (shown here, coconut, breadfruit, and pandanus).

Recommendation—Adopt this Action-Oriented Agenda

- Participatory approaches to determine and serve the needs of farmers and other stakeholders
- Market research to identify new commercial opportunities, especially for indigenous plants producing marketable products (fruits, nuts, extractives, medicinals, timber, etc.)
- Landuse planning needs to include Pacifika IIFS
- Research on the integration of trees and crops, building on worldwide knowledge
- Research on domestication of novel tree crops
- Farmer training and the establishment of NGO support
- Extension and dissemination of outputs of former research and development projects
- Awareness building in rural communities about Pacifika IIFS
- Development and protection of data and databases on soils
- Improvement and enforcement of landuse policies
- Private sector involvement in rural development
- Multi-disciplinary and multi-institutional projects
- Ministerial ownership of multi-sector initiatives

For further information

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