

Timor - Leste

Agricultural Rehabilitation, Economic Growth and Natural Resources Management

APPROACH

Participatory rural appraisals (PRA) were carried out in January 2004 with communities in Venilale (high elevation), in Gariuai (mid-level elevation) and in Seical (low elevation) by a team consisting of MAFF staff and social and biophysical scientists from the University of Hawaii. From information gathered during the PRA, plans and activities were implemented for a two year period.

Initial efforts have been focused in the Seical watershed of the Baucau district with rural communities situated at low, medium and high elevations.

PROBLEMS

- Widespread food shortage, low soil fertility
- Low income (< \$400/year), high unemployment
- Severe soil degradation

FOCUS

- Increase agricultural productivity and food security
- Diversify and intensify crop production to generate new income and employment opportunities
- Improve watershed productivity and sustainability through the adoption of sound natural resource management practice



Fertilizer application strategies were implemented with locally grown varieties of corn and rice



Rice and corn are the primary agronomic food crops grown at high, medium and low elevation in the Baucau district



PRA were used to understand household concerns and constraints



Fish, chickens, pigs and vegetables were identified and selected by 'benefit' groups in the watershed as means to increase household incomes



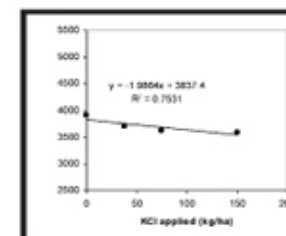
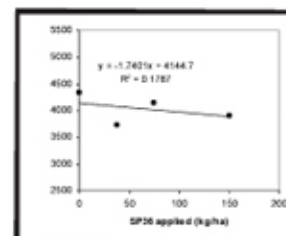
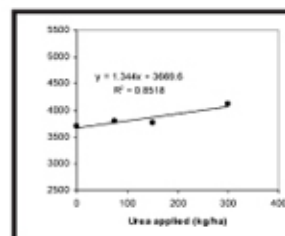
Farmers identified means to transport produce from Venilale (Baucau district) to markets in Dili, the nation's capital



Leafy vegetables produced at higher elevations in Venilale were higher quality and sold quicker than those produced in other regions



Soil testing was introduced to MAFF to allow site-specific fertilizer recommendations



Maize grain yield response to applied fertilizer. Experiments showed that maize yield responds positively to applied urea. Maize yields did not increase with applied SP-36 or KCL. These results generally confirmed the soil analysis results from the soil test kit that showed low soil N but high soil P and K. Data points are averages of the high-, mid- and low-elevation sites

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OUTCOMES

- Agricultural productivity
 - MAFF staff diagnoses soil fertility deficiencies (nitrate, ammonia, phosphorus, potassium, pH) across the country with portable Soil Test Kit
 - Fertilizer recommendations generated from PDA-software based on NuMaSS algorithm
 - MAFF staff trains rice farmers on method that produces 1-2 tons/ha more rice without added inputs
- Income generation
 - Relationship between crop/livestock production and biophysical/economic factors were studied to predict the feasibility of income generating businesses from site-specific information
 - MAFF staff assists local farmer groups to produce and market vegetables, chickens, goats, fish, bamboo, and candlenut
- Natural resource management
 - MAFF produces healthy tree seedlings for distribution to local communities
 - MAFF encourages farmers to enclose livestock and use tree fodder for feed
 - MAFF currently producing soil resource map for sustainable land-use strategies

WHERE DO WE GO FROM HERE?

Agricultural intensification that leads to income and employment generation without compromising environmental quality. The participation of the farming community is essential. Past efforts show the key to success is to promote practices that are economically beneficial for the adopter. Training and institutional capacity building components that promote the application of a participatory approach offer farm households' options and enable them to exercise choice in attaining sustainable land management

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Project website: <http://tpss.hawaii.edu/tl>