

Trip Report, East Timor July 20th to 31st, 2005
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Schedule

Wednesday July 20th Arrived in Dili noon. Met with James Biscoe, MAFF information and extension advisor. Mr. Biscoe has an economics background, extensive international experience, and lots of ideas. I filled him in on the UH program. Then met with Sarina Kilham, MAFF NGO support consultant. Her role is to help bring the various NGOs together and let Timorese professionals know what everyone is doing. I filled her in on the UH program. I gave both copies of the UH agroforestry CD and let Sarina know that Nina Amaral would have more copies for those who need them. Sarina would like to know about upcoming events such as field days and training workshops. Dinner with Michael Jones, UH project coordinator.

Thursday July 21st. Met with Stephan Vance and Angela Rodrigues, US AID. Briefed them on my activities in East Timor. Met with Shane McCarthy, CCT. Discussed forestry programs and upcoming national forestry conference. Discussed USDA Forest Service assistance in planning for removal of diseased coffee shade trees. PM Met Michael Jones, Aracely Leiva, PCV, and UH East Timor students Rita, Domingos, and Jose. I taught them about rapid rural appraisal, using our project's PRA as an example and a presentation developed by Hal McArthur and myself, and we discussed the students' summer RRA project in Ermera. Staff meeting with UH project staff.

Friday July 22nd. Met with Mario Nunes, MAFF head of forestry. I was invited to attend the national forestry conference in November. Mario Nunes also explained that MAFF has hired 2 forest guards for each district, whose job is 70% outreach and 30% enforcement. Met with Gene Ward, Peace Corps country director. He expressed enthusiasm for working with the UH program. PM I met Roman Kokodyniak, US Peace Corps trainer, and made a presentation on PRA to the Peace Corps training group (TL 4, Community Development) in Balibar, about 40 min outside of Dili. Remained at Peace Corps training site for several hours talking with the trainees.

Saturday July 23rd. Visited CCT nursery and forage tree trials and met with Felix, CCT forester.

Monday July 25th. Travel to Baucau with UH staff Francisco Soares and Benjamin Gutierrez. Visited forage tree trial in Vermasse, visited MAFF Baucau office, met with forester Pascoal Belo and others in MAFF office and UH staff. Visited Triloca nursery to see bamboo propagation results.

Tuesday July 26th Traveled with Pascoal Belo to various locations in Baucau district to assess survival of trees raised by MAFF Baucau and planted by various communities. Met with individual farmers in 3 localities.

Wednesday 27th. Travel to two other communities in Baucau area to assess survival of newly outplanted trees in district with Pascoal Belo. Visited Pascoal's forestry demonstration site near Fatumaca. PM Met Brigidia, GTZ program director in Baucau.

Thursday July 28th. Measured heights and percent survival of trees planted in Gariuai forage tree demonstration and discussed results with group of 6 farmers from Gariuai and Pascoal Belo. Traveled to Ossu to see forage tree demonstration established by Domingos Pereira, MAFF Viqueque district forester. Met with Domingos and farmers group of 6

farmers in Ossu and gave presentations on bamboo propagation, forage trees, and improved fallow management.

Friday July 29th. Gave presentations on bamboo propagation and forage trees to farmer's group in aldeia Waitolea Ana in Fatulia, Venilale. Twenty farmers attended. Planted seven potted, growing bamboos at farm in aldeia with group. Walked to demonstration site at Bubuanacala, Fatulia and measured forage tree demonstration there. Met Jose Ximenes and reviewed status of UH project land use groups. Met with Fr. Joseph Vattaparambil of the minor seminary in Venilale to discuss agricultural development projects; gave him UH agroforestry CD and PRA and land use videos. Fr. Joe is a founder of the Don Bosco agricultural school in Fuiloro, Los Palos and has been involved in development projects in Timor for 20 years.

Saturday July 30th. Traveled back down to Vermasse to measure trees in forage tree trial there. Returned to Dili. PM Met with Michael Jones and Shane McCarthy, CCT.

Sunday July 31st. Returned to Hawaii.

Narrative

The MAFF forestry nurseries in Triloca, Baucau, and in Buburaga, Venilale, raised 14,000 tree seedlings and distributed them to 17 communities in the Baucau district. While the seedlings were of outstanding health in December during my last visit, they were not distributed to farmers and planted until April, near the end of the rainy season. Tree survival and growth were not as good as they should have been. Survival was over 80% in some communities but as low as 30% in others. The late distribution was due to MAFF problems with transportation, logistics, and planning. The MAFF forester in Baucau, Pascoal Belo, is given only a \$600 budget to cover labor and materials for nursery construction and seedling production and has no budget for transportation of seedlings and eventual distribution to farmers. .

From discussions with MAFF and with farmers, we learned that people are eager to plant trees and want more tree seedlings. Trees distributed to communities seem to have been all planted, with a few seedlings going to each farmer. Farmers requested primarily teak, then other timber trees such as *Pterocarpus* and *Sterculia*, not multi-purpose trees such as *Leucaena* and *Gliricidia* even though they know that teak needs 30+ years to grow to a harvestable size. Teak and *Gmelina* also resistant to goat browse as opposed to *Leucaena*. Seedlings from Triloca were grown in a superior potting mix and these seemed to have better survival than those from Buburaga, which had poor root development from being grown in heavy clay soil. Making a good potting mix was one of the nursery lessons in last year's nursery workshops. Most of the trees were grown in the Triloca nursery. One successful strategy used by some farmers is to interplant plant trees and crops in a fenced field or garden. An example of seen in Gariuai included teak and *Gmelina* interplanted with maize in a field surrounded with a barbed wire fence. In another case, a farmer allowed naturally regenerating *Casuarina* seedlings to grow in a garden until they had established a solid stand. Farmers in the district were also planting fields with the shrub *Jatropha curcas*. There has been an informational campaign and talk of an Australian market for the seeds for oil, although no one has yet sold any seeds. See <http://www.ctahr.hawaii.edu/forestry/data/Timor/Jatropha.html> for more information and photos of *Jatropha* in Timor. I discussed plans for next year's seedling distribution

efforts with forester Pascoal Belo. I suggested that in addition to distributing a few seedlings to many farmers, he concentrate 50 to 200 seedlings in one place in each location so as to have a demonstration area. I taught him the importance of following up on planting success and learning from last year's efforts, and we discussed possibilities for demonstration sites and field days.

The forage tree demonstration at Gariuai was growing well. The demonstrations in Bubuanacala, Fatulia and in Vermasse were damaged by goats and people harvesting the leaves from the *Leucaena* seedlings for forage. The community in Vermasse has abandoned the site and the plot was not maintained. The species that were not browsed (*Sesbania* and *Gliricidia*) grew well. *Sesbania grandiflora* showed the best height growth at all three sites. While palatable to goats, it grew above goat browse line before the fences collapsed, in contrast to *Leucaena*. It should be noted that *Sesbania* usually grows back slower after coppicing than *Leucaena*, *Gliricidia*, or *Calliandra*, so initial height growth may not be a good index of forage production. The *Leucaena* var. PG79 from Indonesia grew better than varieties Kx2 from Hawaii and Tarramba from Queensland at both the Fatulia site (850 m elev) and the Gariuai site (400 m elev.) Kx2 and Tarramba were severely attacked by the *Leucaena* psyllid at the Gariuai site while PG79 was not. *Leucaena* var. Kx2 was not attacked as severely at the higher Fatulia site as it was at the Gariuai site, and PG79 was not attacked by the psyllid at either site. Photos and plans for the forage tree demonstrations maybe be seen on the Timor agroforestry program website, <http://www.ctahr.hawaii.edu/forestry/data/Timor/TimorForage.html>.

Forester Domingos Pereira of the MAFF Viqueque district office has established a forage garden of 20 x 20 m with over 600 trees in Ossu with assistance of UH and the MAFF Baucau nursery. The garden includes *Gliricidia*, *Sesbania*, and *Leucaena* intercropped with maize. He intends to build a goat house as a demonstration of raising confined livestock. Farmers in Ossu requested more copies of the Indonesian-language agroforestry booklets distributed by the UH program. Forester Pereira's forage garden demonstration is one example of the MAFF taking lessons learned from the UH program outside the Baucau district and Seical river watershed.

Six sets of laminated posters on growing and using forage trees were distributed to MAFF and the communities in the Baucau area during the workshops last December. Forester Belo in Baucau reported using the poster set three times to give talks to communities. Forester Pereira reported that he had used the posters at least 10 times. The CCT program had not used them yet but expressed interest as they gear up their extension program. We used the poster set given to the Fatulia community to give another talk too a different location this trip. MAFF Dili sent the booklet of the scripts to the ALGIS office for duplication.

The bamboos propagated from rooting cuttings during the December workshop grew well, with 21 out of 22 plants surviving and 7 of these having grown new rhizomes and sent up new culms 7 months after planting. Timorese farmers and agricultural professionals repeatedly stated that they had never heard of bamboo propagation by cuttings. We planted the bamboos which had developed new culms at an irrigated farm in

Fatulia as a demonstration. When the bags were removed, farmers were able to see the excellent root development and the growth of new rhizomes. We worked on refining the Tetun translation of a 2-page leaflet on bamboo propagation. I brought MAFF 250 more polybags to encourage them to plant more bamboo next season (probably December 2005). See <http://www.ctahr.hawaii.edu/forestry/data/Timor/bamboo.html> for photos and information on the bamboo propagation.