

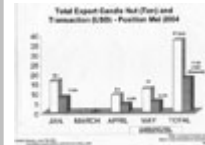
Travel Report  
Harry Ako,  
Department of Molecular Biology and Biosystems  
Engineering,  
College of Tropical Agricultural and Human Resources  
University of Hawaii

June xx to xx, 2004

Filipe da Costa arranged for me to meet with both the Minister of Agriculture and the Minister of Tourism and Investment. He is also Secretary of State. Our topic of discussion focused on the use of agricultural residue as possible source of energy. This is the topic of Filipe's internship study. (below, there are comments on feasibility). They were very interested. We also discussed kukui (candlenut) and its possibilities, including setting up an oil pressing plant in Baucau. To chemically stabilize the oil, I informed them, both ascorbyl palmitate and nitrogen gas were required. The Minister volunteered to get tanks of nitrogen gas to us. The stabilized oil would be shipped to Surabaya and thence to Hawaii. (Priced later.) I told them I would insist that the head of the plant would have to be a CTAHR-trained bioengineer with a year internship at Oils of Aloha in Hawaii. Prices being paid to women and children who gather and shell kukui nuts could easily be doubled. THEY WANT TO HAVE A CONCEPT DOCUMENT FROM UH. There will be tax vacations, freedoms from tariffs on fuels used by the factory and equipment for the factory. The graph to the right shows that E. Timor shipped 37 tons of kukui nut meats to Surabaya between Jan 2004 and May 2004 from the Baucau district only. They received about \$0.45/kg. They stopped shipping when price dropped to \$0.07/kg. Andre du Toit located an abandoned warehouse, formerly used by the Portuguese as a customs storage facility (two photos). It has two monster rooms that can be used for an oil factory. The place has no electricity, however.

Shipping costs from Dili to Surabaya would be about \$400/container. The price would be \$2,400 from Surabaya to anywhere else including Hawaii.

I told them of the tuna aquaculture project. The Minister of Agriculture whose responsibility includes fisheries was especially excited. The Minister of Investments pointed out that Baucau has an international airport where tuna could be flown to Japan or Hawaii. The two secondary ports (other than Dili) are nice but not very active (photos). They have small boats that can be purchased in Surabaya (photos). THEY ARE TO SEND LETTERS OF SUPPORT FOR BOTH THE KUKUI OIL AND THE AQUACULTURE PROJECT. The letters are to be used for U.S. A.I.D.



Sales Report



Warehouse 1



Warehouse 2



Baucau Dock



Lospalos Pier



Typical boat

Met with Shane McCarthy, CCT. CCT is a remnant of a Portugese plantation that was taken over by the Indonesians. It is now a coffee cooperative and the staff, which is American/Australian, is paid for the U.S. A.I.D. For obvious reasons they are targets of strikes. He said that they do about 31 tons of cherries a year and there are about 10 places where they do coffee. About 20% of this is coffee beans. Harvest is between June-August. Coffee represents 40% of the GDP. Another source says they do about 40 tons a year for the whole country. We visited two factories. One processed coffee cherries with the machine pictured. The cherry skins/fruits are loaded into a truck (photo) and are dumped on the sides of the roads (photo). Numbers are hard to come by but one estimate is that 5,000 tons a year is cherry skins (another estimate 4,200 tons annually). We examined a mound of cherry skins. It is relatively dry or would be if they turned it over periodically. The coffee beans are covered with a mucilage. This is fermented off in water over 48 hr (photo). They have a bioremediation problem. The residual water is tea colored and is released into local streams. They could remediate it first. The beans (photo) are taken to Dili where the parchment is removed. A picture of a pile of parchment is shown (photo). There are about 800 tons annually. The parchment is pure cellulose and could either be burnt or formed into logs for firewood.

According to Filipe, there is also substantial tonnage of rice straw 30,000 tons per year but it is left in the fields or burnt and corn stalks (80,000 tons per year).

Met with Jim Lehman, U.S. A.I.D. director. I described the agricultural residue to energy [not said, is there enough to burn?], kukui nut oil, and aquaculture projects. HE SAID HE WANTED ELECTRONIC COPIES OF PROPOSALS A.S.A.P. He was very supportive. For aquaculture project he wondered about security. Across the way in Indonesia, the Bugis people live. They are aggressive people and are the original boogeymen. The people from Baucau are tough enough to take them on and fights in Dili are usually between Bugis and Baucau people.

Walking around Dili weird at night. There are no streetlights. It is so dark you cannot see your feet and must trust that there is something when you put your feet down. I fell into a ditch and had to go to a restaurant all wet and covered with stinky mud.

When we visited Baucau, the first two hotels were full. We ended up staying in a rectory. They had no electricity except they turned on a generator between 7 and 11 p.m. They had no running water and showering had to involve dumping pots of water on yourself. The toilets had to be dumping pots of water to flush them.

U.N. cars all over the place. The Japanese are rebuilding the irrigation system. The Australians are being the police and providing medical care. East Timor is reportedly the poorest country in Asia.



Cherry stripping machine



Cherry skin struck



Mound cherry skin



Fermenting cherries



Bean sand parchment



Pile of parchment