

Trip Report

Traveller: Goro Uehara
Period: August 1-8, 2004
Purpose: Assess feasibility of establishing a candlenut oil extracting plant in East Timor

The candlenut tree, *Aleurites moluccana* is native to tropical Asia and performs well without care in humid climates from sea level to elevations of 1500 meters. The kernel is used as a relish in some countries and as oil for the cosmetic industry in Hawaii.

In East Timor, the kernel is exported to Indonesia at prices ranging from 35 to 50 cents per kilogram. When prices fall to 35 cents per kilo, harvesting of the nuts by villagers come to a standstill, and resumes when prices increase or when economic conditions offer nothing better.

In Hawaii, candlenut grows naturally in inaccessible mountainous areas and labor costs are too high to make harvesting of the nut profitable. To meet the industry's demand, **Oils of Aloha**, the major candlenut processors in Hawaii, imports candlenut oil from Indonesia. The oil is shipped via Singapore from Medan, Sumatra to Honolulu in 55 gallon drums.

The USAID funded Collaborative Research Support Program between the Ministry of Agriculture, Forestry and Fisheries and the University of Hawaii provides the mechanism to link the supply of East Timorese candlenut oil and to **Oils of Aloha's** need for candlenut oil into a mutually beneficial partnership and venture. This partnership and venture can lead to the enhancement of the four properties of sustainable development of East Timor. These four properties are high productivity, high stability, high resiliency and high equitability of East Timor's agro-ecosystem.

The first requirement for sustainable agro-ecosystems is high biophysical and economic productivity. East Timor's candlenut industry is highly productive from a biophysical standpoint but is marginally productive economically. By offering 50 cents per kilo of candlenut kernel, **Oils of Aloha** can render East Timor's candlenut industry highly productive in the fullest sense of the term.

High stability is the second requirement of all sustainable agro-ecosystems. Stability refers to variability in productivity as measured in yield or income. Instability adds risk and uncertainty to an industry or enterprise and leads to situations that range from feast to famine that compel households to act conservatively and avoid taking risks. **Oils of Aloha** can add stability to the system by ensuring a steady and growing market for a potentially valuable commodity.

The third property of sustainable agricultural systems is resiliency or the ability of the system to maintain productivity when affected by large stresses or perturbations such as weather-related events such as El Nino or pest infestation. As a tree crop that is well-adapted to East Timor soils and climate, candlenut adds resiliency to the agro-ecosystem. It remains productive during droughts and has virtually no natural enemies. By adding value to candlenut, **Oils of Aloha** will encourage rural communities to take better care of existing trees and may encourage planting of trees in deforested zones, thereby increasing the resiliency of the agro-ecosystem.

The last and fourth property of sustainable agro-ecosystems is equitability. This refers to the equal sharing of benefits derived from the system. Unlike offshore fossil fuels where income from sales often fail to benefit rural communities, candlenut is evenly distributed within the agro-ecosystem and is harvested by women, children and the aged. As an integral component of the agro-ecosystem, candlenut by its very nature ensures equitable sharing of the benefits it provides to society. By adding value to candle nut, **Oils of Aloha** can help transform a subsistence farming system into a more market-oriented economy.

Oils of Aloha's market for candlenut currently resides with the cosmetic industry. Candlenut is also rich in omega-3 oils. There is a possibility that in the future, the value of candlenut will be for its omega-3 oil and its worth as a dietary supplement. In any case, there is a bright future for candlenut, and East Timor's early entry into a new market enables it to benefit from it before its competitors.