

Harvest

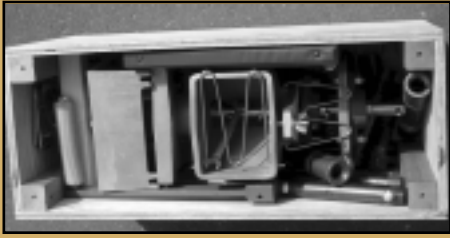


Photo 1

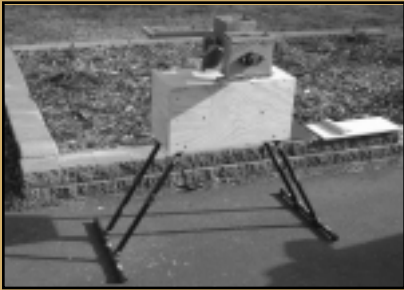


Photo 2

4

Therapeutic Toddler Food in Bangladesh

by Bruce Humphrys

CTI's successful Therapeutic Toddler Food (TTF) process, developed last summer at a medical clinic in Haiti, is on its way to Bangladesh!

CTI volunteers Dr. Nancy and Steve Laible have worked with a hospital in rural Bangladesh for several years, and will be going there in November of this year to inaugurate the TTF process in six clinical settings. Six CTI Omega VI grinders complete with measuring spoons, bowls, scrapers, and spare parts have been shipped via Global Health Ministries to Dhaka in special wooden crates (photo 1) which,



The Omega VI grinder has improved productivity throughout many communities.

when unpacked, serve as the stands for the grinders (photo 2). We are also looking at sites in Africa for further extension of this valuable technology. ■

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Harvest

The Demonstration

by Emily Dunn

The day the Omega VI made its way to Kohel, Senegal, was one of anticipation, excitement and relief. After almost a year of planning, a group of nine Peace Corps volunteers and staff, village counterparts, and CTI member and project coordinator Steve Clarke, recently completed an intense three-day training where every aspect of the Omega's operation and maintenance was tested.

Volunteers awaited the results of the true test: to see how the grinder would evolve from a basement workshop in St. Paul, Minn., to a rural Senegalese village of four hundred curious onlookers. Saara and Penda were the villagers who participated in the previous days' training and those whom I counted on to convey the capability of this smart little machine to the village.

The entire women's group, outfitted in their nicest dresses and most colorful headscarves, turned out to see the demonstration. Even some of the more influential men in the village were lured from their perch under the baobab tree to see what the commotion was about. Saara assembled the table in the center of the compound like a professional and reached for the Omega in its crisp new box to bolt to a table amid a wave of excited chatter.

Peanuts were the first to be tested. Onlookers watched in amazement as Diella, the president of the Women's Group, turned the manual crank with ease, creating a ribbon

of smooth, creamy peanut butter from the other end of the Omega. A series of women stepped up to the machine and acknowledged the same ease of cranking, while fingers of adults and kids alike sampled the fruits of their labor and reported satisfactory results. Clipboard in hand, I could not record the comments fast enough on my CTI evaluation form. We tested the remaining 10 kilos of roasted peanuts, and a majority of women and men had their turn to use the grinder and give their comments. Some young men had a contest to see who could grind the fastest. Some women were dancing, singing and clapping around the Omega.

We cleaned the burrs in hot water and prepared for test grinding millet. The Omega's effectiveness was impeded by the seed coats of the millet grain, which made it hard to grind and simultaneously unappealing for the women, who meticulously separate the grain from the seed coats when they pound manually. Once the hulls were removed, the quality and fineness of the flour was favorable, which has prompted CTI to develop a millet de-huller.

The demonstration concluded with the unanimous agreement that the Omega VI would be readily accepted for peanut grinding. After a brief prayer, the gathering dispersed and Saara was proudly instructing a few men how to disassemble the machine and the table. "The machine is good, Aminata," Saara said to me as we carried it back to his hut. "Yes," I replied with a smile, "the machine is very good."

continued on page 2

Our Work:

CTI designs and adapts simple, efficient and inexpensive technologies in response to small-scale food processing and related needs in rural areas of developing countries. We work as technical consultants to, and as project partners with, local agencies who integrate our technologies into the processing systems currently used in households and local entrepreneurs. Our experts train in the manufacture, use and maintenance of our devices. CTI technologies are available for purchase.

Our Vision:

To make a difference in the economic and nutritional well-being of individuals in developing countries through the development and application of food, water, and related technologies.

Inside Harvest:

Pilot-test of Breadfruit Dryer in St. Vincent - pg. 2

Chlorinator Project Nears Completion in Nicaragua - pg. 3

Therapeutic Toddler Food in Bangladesh - pg. 4





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Volunteer Opportunities

A positive way to contribute to CTI is to find the people CTI needs to carry out its mission. Do you or someone you know share the same passion as CTI?

For more information on volunteer opportunities and to get the latest updates about CTI's work, please visit us at:

www.compatibletechnology.org

continued from page 1

The Demonstration

Upon my return to the states, I had the fortune of attending a CTI Africa Committee meeting, touring the facility where the various technologies are assembled, and meeting with some of the engineers. I was amazed to see a prototype for a millet-grinding machine with the capacity for three people to turn the manual crank. A few women in my village had observed that millet pounding was a social activity and they liked to do it in groups, which this prototype honored. I commend the dedication and work of CTI's volunteers to develop sustainable technologies for rural populations while acknowledging cultural values. In Kohel, the Omega VI continues to decrease workloads and generate income for a village that would otherwise grind peanuts by hand. ■



Zu, a St. Vincent resident, holds two breadfruit. The fruit will soon put the shredder to the test.

Pilot-test of Breadfruit Shredder in St. Vincent

by Christy Reisner

For the second time in recent years CTI has teamed up with the University of St. Thomas (UST) Engineering Department to develop new technologies. Seven engineering students, four French students and two journalism students traveled under the direction of Dr. Camille George and Professor Ashley Shams to the island of St. Vincent. A breadfruit shredding and drying system was tested as part of the engineering students' senior design class.

Dr. George, advisor to the students, said the students have been working on the project all year long and had a fun time testing the shredder and dryer in St. Vincent. Dr. George said she wished the group could have traveled to Haiti (where the technology will eventually be sent) to do testing as they had originally planned. The group was forced to relocate to St. Vincent due to rising hostilities in Haiti.

Dr. George said previous travels to Haiti proved the obstacles women in the country faced. She knew she wanted to help them find a way to make their business endeavors successful.

Breadfruit is a starchy fruit that grows on trees in the Caribbean. Once the fruit is shredded and dried it can be ground up into flour and used to make pancakes, bread, cookies and more.

Dr. George is glad to have embarked on this journey with CTI and hopes they can partner again in the future. ■



Chlorinator Project Nears Completion in Nicaragua

by Harry Jebens

One major cause of infant mortality in developing countries can be attributed to contaminated water supplies. CTI, with funding from the R. C. Lilly Foundation, is completing Phase II Testing of a low cost Chlorinator in the Matalgapa region of Central Nicaragua.

Charlie Taflin, CTI Volunteer and former Engineer for the City of Minneapolis, developed the CTI Chlorinator after testing eight different models.

The Chlorinator is designed for rural areas with a gravity supply of water and populations of 200 to 1000 people (Flows of 2 – 5 GPM). The system is constructed of available PVC pipes, plates, and fittings and has a cost of construction and installation of \$100, including piping and valves. Disinfection is provided with chlorine tablets. The chlorine tablets are placed in an inverted T in a side line to the main water flow line. An outlet weir controls the depth of water in the chlorination tube. Water flows through the chlorine tablets and the flow can be regulated to provide the desired dosage of chlorine to maintain chlorine residual throughout the village of 0.5 to 3.0 mg/l.

In the fall of 2001 Fred Jacob, Project Manager for CTI, and Charlie Taflin, in collaboration with the Central Water Ministry for Nicaragua (ENCAL) and the Laboratories for Rural Health (TASCA), began testing the Chlorinator in the Matagalpa region of Central Nicaragua.

Phase I of the Project was the installation and testing of a single unit. Chlorine residuals were maintained throughout the test village within the desired levels during the test.

Phase II is the installation and testing of 15 additional units. Ivan Lira, the Head of the Division of Operation and Maintenance (UNOM) of the Rural Water Division (DAR), has been very supportive of the project and the installation, personnel training and monitoring of the additional units.

Adaptation of the CTI Chlorinator by Ivan Lira (UNOM) to systems with higher flow rates and for pumped water system, if proven, will allow much greater application of the system. Phase II System evaluation will be completed in May of 2004.

Phase III of the Project will consist of the geographic expansion into other regions of Nicaragua. Initial planning with Fundacion Crysol in the Jalapa region of Guatemala is underway. Interest by agencies and organizations in Ecuador, Peru, and Tanzania are being explored by CTI, as well. ■



St. Thomas students assemble drying screens.



Breadfruit dryer nears completion.



Dr. George with students and locals putting shredded breadfruit on drying screens.

If you would like to submit an article for the Fall 2004 issue of *Harvest*, please send submissions to CTI via postal mail, email or fax as listed on back page.

Note that submissions may be edited for content due to space limitations.