

## MORINGA PROCESSING IN GHANA

Moringa is a tree found throughout the tropical regions of Asia, Africa, and South America whose leaves, known for their nutritional value, are often eaten fresh by the local people in these areas. When the leaves of this tree are dried and crushed, however, their nutrient content per gram increases greatly. For example, a mere three tablespoons provides almost half of the protein, over 100% of the recommended calcium, 71% of the iron, and many other essential vitamins and minerals required daily for a child to be well-nourished.<sup>1</sup> Unfortunately, an efficient method for grinding the leaf material into a shelf-stable, powdered food supplement has not been accessible to the people who need it most. Enter CTI.



With a grant from the Sundance Foundation, CTI volunteers Dick Fulmer and Ed Galle evaluated the use of the CTI Omega VI grinder for producing Moringa leaf powder using leaves supplied by ECHO, the well known NGO in Florida. The studies indicated that by drying leaves to less than 9% moisture (non-solar drying preferred), manually crushing them through a 6 mesh screen to remove large stem material, followed by one pass through the Omega VI, a fine Moringa leaf powder could be easily produced.

With testing completed and encouragement from the Moringa Association of Ghana (MAG), the Food Research Institute in Ghana, the Kwame Nkrumah University of Science and Technology, the Peace Corps, and others, these volunteers took two Omega VI grinders to Ghana for a lecture and demonstration program in

February 2008. During this trip they made six presentations to over 400 local Ghanaians who were seeking an improvement to their traditional Moringa processing technique of pounding with mortar and pestle. All who saw and used CTI's grinder technology applauded its efficiency and the quality of the product, including the MAG, who prides itself on its rigorous quality standards.



Chair of the MAG, Mozart Adevu, kept two grinders for use and further demonstration, and visited the St. Paul office in August 2008 to tour the shop and to discuss a Moringa business plan. A series of action items were developed and exploration of further work with MAG has begun.

Additionally, CTI met with Reverend Johnson Asare, who runs The Radach Memorial Centre in Tamale, Ghana, which is home to 2 million people in the city and surrounding areas. He was very enthusiastic about CTI's grinders and visited the St. Paul office in June 2008 to discuss purchasing several grinders to be distributed in Tamale and surrounding areas. The conversation is still underway and everyone at CTI is optimistic about our connections to those who can distribute these life-sustaining technologies to those who need them the most.

<sup>1</sup> Fuglie, Lowell J., *The Miracle Tree/Moringa oleifera, Natural Nutrition for the Tropics*. (Dakar, Senegal: Church World Service, 1999), 113.