

**IMPROVING NUTRITION  
MORINGA PROCESSING  
GHANA**

**Despite important economic progress in recent years, malnutrition in Ghana is still a serious problem for women and children**

**In Ghana, the mortality rate for children under-five is increasing**

**18% of children in Ghana are under-weight for age**

**If untreated, malnutrition in early childhood will cause irreversible physical and mental disabilities**



**BACKGROUND**

Moringa is a tree found throughout the tropical regions of Asia, Africa, South America, and the Caribbean. The leaves of this tree are highly nutritious when they have been dried and crushed. For example, a mere three tablespoons provides almost half of the protein, over 100% of the recommended calcium, 71% of iron, and many other essential vitamins and minerals required for a child to be well-nourished.

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. Traditionally, farmers use a mortar and pestle to mill moringa. The task of grinding moringa is usually performed by women and is both strenuous and inefficient.

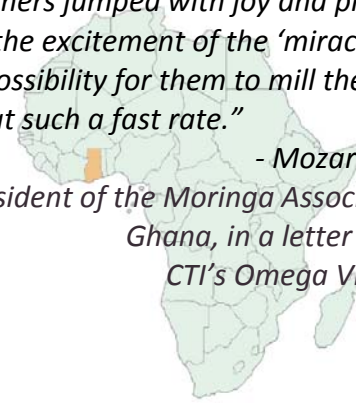
**IMPACT**

With the aid of CTI's Omega grinder, it takes less than an hour and far less effort to produce 1kg of high quality, fine moringa powder. At the presentations in Ghana, 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. CTI continues to work with partners in Ghana and Liberia to perfect the process for grinding moringa and to secure funding for the numerous communities who wish to have access to CTI's technology.

For nearly 30 years, Compatible Technology International (CTI) has been helping people in developing countries pull themselves out of extreme poverty and hunger. By designing and distributing life-saving food and water technologies, CTI provides the world's poorest populations with the tools they need to feed and support themselves.

*"[T]he farmers jumped with joy and praised God with the excitement of the 'miracle' of the new possibility for them to mill their products at such a fast rate."*

*- Mozart Adevu,  
President of the Moringa Association of  
Ghana, in a letter praising  
CTI's Omega VI grinder*



**SOLUTIONS**

Beginning in 2007, CTI volunteers evaluated the use of the CTI Omega VI grinder for producing Moringa leaf powder. Through their research, they developed a simple process for creating a moringa powder with CTI's Omega VI grinder.

With testing completed and encouragement from the Moringa Association of Ghana (MAG), the Food Research Institute in Ghana, and others, CTI volunteers traveled to Africa to present their findings to over 400 Ghanaians who were seeking an improvement to their traditional Moringa processing technique of pounding with mortar and pestle. Subsequently, CTI's volunteers have traveled to Liberia to train locals to use the grinders to make moringa powder for consumption and sale.