

**Pearl Millet is high in protein and has a good amino acid balance**

**Pearl Millet is less susceptible to contamination by carcinogenic toxins such as aflatoxin**

**In sub-Saharan Africa, pearl millet it is the only cereal grain that will tolerate the climate where maize or even sorghum will fail**

**Pearl millet is used to make breads and porridges and the stalks can be used as building material and animal feed.**



*“At least 500 million people depend on pearl millet for their lives...Despite its importance, however, pearl millet can be considered a “lost” crop because its untapped potential is still vast.”*

*- “Lost Crops of Africa”, Board on Science and Technology for International Development, National Research Council*



### **BACKGROUND**

Pearl Millet is the crop of choice in many ecosystems where drought, poor soil quality and extreme heat predominate. It is well adapted to areas in Africa and India and has recently been introduced into the Americas.

Traditionally, pearl millet is processed by breaking the grain apart by mortar and pestle action in a hollowed out log. The grain is then winnowed (separated from the chaff) by simply tossing the lighter weight chaff in the air, an extremely wasteful technique. Women are primarily responsible for this labor-and time-intensive processing.

The development of post-harvest technologies that produce more grain with less breakage would provide cost savings and free women’s time to pursue entrepreneurial activities. New pearl millet processing devices would maximize the potential of this staple food that feeds some of the world’s poorest people.

### **IMPACT**

During the fall of 2009, CTI will travel to Mali to field-test the thresher on the fresh pearl millet harvest. Initial tests of CTI’s pearl millet thresher have resulted in an improvement in yield up to 2-3 times greater than possible with traditional processing methods.

### **SOLUTIONS**

In 2004, CTI began researching simple and effective technology for processing pearl millet more efficiently. The difficult characteristics of this grain have been an obstacle to the development of new threshing methods in the past. A thresher is a device that separates kernel from the stalk of the pearl millet. If any grains are crushed in the process it can lead to rancidity.

With the research phase completed in 2008, CTI volunteer Erv Lentz worked for several months on developing a pearl millet threshing device. The prototype, dubbed “the Leary Thresher”, was further improved through collaborations with a USDA scientist, an engineer from the Battelle Memorial Institute, and General Mills. Through these collaborations, alterations were made to the thresher to improve user safety, decrease the rate of broken grains, and reduce the thresher size and weight.

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.