



CTI Omega Grinder Enhances Peanut Paste Production in Zimbabwe

CTI found a unique partner in the mid 1990's when it joined forces with the University of Zimbabwe's Development Technology Center (DTC), directed by Tunga Rukuni, to assist local Women's Groups enhance their household nutrition and market profits through more efficient peanut butter processing. Most local groups used inefficient imported grinders or the laborious and time consuming traditional mortar and pestle for crushing followed by manual stone rubbing to produce small quantities of a fine, smooth product for home use and the market. Recognizing the central need for an efficient low-cost grinder to enhance this process, CTI and DTC implemented a program, supported by the Food Industry Crusade Against Hunger (FICAH), to assist and promote this local industry.



CTI based this technology on its Omega grinder, a sturdy hand or power driven 4.5 inch diameter steel burr mill that can be used for grinding peanuts, grains and other commodities. The housing is cast aluminum. The power shaft driving the grinding burr rotates in sealed bearings and is fitted with removable stainless steel auger helixes selected for the particular commodity being processed. Originally designed by CTI engineers for processing maize, a number of Omegas were distributed to rural Zimbabwe peanut butter groups. In response to their experiences, CTI engineers modified this mill as the Omega IV model to better meet local processing needs. Peanuts can be processed at a rate of 50 Kg per day with this manually operated mill in comparison with 4 Kg using traditional methods.

CTI's primary task in this partnership was to establish a sustainable production capacity with local manufacturers. A pattern for casting the Omega housing and a special apparatus to form the auger helixes were provided through DTC. Mark Kooiker, CTI volunteer and machine shop operator, worked with DP Castings, a local foundry and machine shop, and local fabricators to develop precision production techniques. Consequently all Omega IV grinders and parts distributed in Zimbabwe are manufactured locally. Three hundred grinders were distributed through this joint project and a recent survey counted more than 800 Omegas in the country.



A survey of grinder operations in 2000 showed 75% are Omegas and where power is available these units are motorized. More than half (54%) of these operations are located in communal areas and 40% are urban. The survey reports that Omega grinders produce higher outputs and these enterprises are continuing with enjoyment of positive social and economic benefits.

CTI continues to liaise with DTC on food processing and related technologies and with the Zimbabwe grinder production industry.