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Promoting Market Driven Sorghum Production in Zambia

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Promoting Market Driven Sorghum Production in Zambia

The economic benefits were astounding. Net socio-economic benefits rose from $67,000 to $135,000 in one year.

Widow whose family depends solely on the income from her farm

In the southern Africa region there is significant interest in using sorghum in the manufacture of value added food products. However, for sorghum to be commercially successful, quality grain at an affordable price must be available. Zambian food processing companies cannot consistently acquire sufficient quantities of high quality sorghum for processing. Market channels need to be improved so that sorghum varieties with the required quality to meet commercial consumer requirements are produced and supplied consistently. A strong need exists for strengthening the system of production, post–harvest handling and storage, marketing, and processing for human food and livestock feed. To meet these needs, INTSORMIL is collaborating with the Zambia Agricultural Research Institute (ZARI) which has a major role in crop diversification in Zambia.

To raise the status of the sorghum crop, ZARI/INTSORMIL, Zambia Breweries, Golden Valley Agricultural Research Trust (GART), Care International and other stakeholders embarked on a collaborative commercialization project in Kazungula District that is traditionally a sorghum growing area. Drought is common and the district often depends on food relief from the central government. A market survey indicated a big market potential for sorghum estimated at 11,000 metric tons. Thus, a market driven scaled up sorghum production project with the following objectives was established:

Doreen Hikeezi, a PhD. student at the University of Pretoria, from the University of Zambia, observing sorghum and millet-based food products at the University of Pretoria

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- Identify & Quantify Market Demand
- Establish a Market for Sorghum (Local and Export)
- Promote Sorghum Production & Consumption
- Ensure Food Security
- Drought Management
- Increase Income and Profitability of Farmers
- Create Sustainable Micro Enterprises (Value Added)

A key factor in establishing markets for sorghum is to breed varieties that have the attributes needed for food processing uses. Dr. Medson Chisi and his team at the Golden Valley Agricultural Research Trust in Zambia have developed a number of varieties that are highly suitable for brewing beer. Through the project he is working closely with farmers, NGOs (Care International) and brewing companies in Zambia to implement adoption of these varieties.

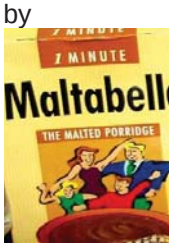
In the 2005/2006 season the project involved farmers from two cooperatives, Sikaunzwe and Kazungula. A total of 633 farmers participated in the project and 316 hectares were planted. ZARI held several meetings of a participatory nature with the farmers at various stages of the crop development to impart knowledge on crop management. Zambia Breweries signed forward contracts with the cooperatives and agreed on a price depending on the grade of the crop. The better quality grain fetched a higher price.

The response of the farmers and their grain yields were overwhelming. Some farmers on good soils recorded 3,000 kg/ha as opposed to the average yield of 500 kg/ha. A total of 200 tons of grain sorghum was contracted to Zambia Breweries.

In year two (2006/2007) the number of cooperatives increased to four and 1,266 farmers participated. Number of hectares planted increased to 633. In addition, steps in value adding were instituted. A mobile sorghum thresher, a dehuller and a hammer mill were procured for the cooperatives. The cooperatives purchased the grain not sold to Zambia Breweries and processed it into flour and packaged it in 1 kg, 2 kg, 5 kg and 25 kg bags. The sorghum flour has become popular with farmers in the area and the cooperatives have plans to export the commodity to the neighboring countries of Botswana and Namibia.

Mike Quinn, CARE, a Canadian with "Engineers Without Borders" (2nd from left) and local volunteers weigh a sorghum grain sample from a yield contest for farmers.

The economic benefits achieved were astounding. It is estimated that the net socio-economic benefits (increase in farmers' income + increased employment +additional income to cooperative partners) in the project area rose from $67,000 the first year to $137,000 the second year of the project. Also, estimated income from sales by the cooperatives was about $300 per day for a total of $108,000 per year.



With improved food security, enhanced farm income and improved economic activity the lives of the people of Kazungula and Sikaunzwe will no doubt change markedly. In light of this overwhelming response it has been proposed to replicate this activity in other potential sorghum growing areas in Zambia such as Mpongwe and Kasempa in Region III. Hopefully such an activity will also serve as a catalyst to improve their lives through enhanced farm income.

Mike Quinn (CARE), and Medson Chisi (ZARI), 2nd and 3rd from left respectively, inspect a flowering sorghum field with local volunteers.

Medson Chisi (ZARI), Godwin Kaula (ZARI) and the local technician, Donald, inspect the harvest of two young female farmers in the Lusito/Siavonga region of Zambia.

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