



INTSORMIL

Sorghum, Millet and Other Grains
Collaborative Research Support Program

Inside the Grain

Growing solutions to global hunger



INTSORMIL Sponsored Food Training in Tanzania

Recently INTSORMIL sponsored training sessions for various women's groups in Tanzania. Each group received three days of training. The training was conducted in close collaboration with the Nzasa women's group, Sokoine University of Agriculture Government Chemistry Laboratory Agency (GCLA) and Tanzania Food and Nutrition Centre (TFNC) which played a role as a coordinator. The main purpose was to increase the number of new women's groups and support them with training and supplies, including simple equipment and utensils. This training will help the women to start processing sorghum based food products based on the success stories of the Dar-es-Salaam based Nzasa women group.

The Dar-es-Salaam group is a newly formed group from Kinondoni District in Tanzania. During their training session the group received knowledge and skills on how to process sorghum into different food products. The training workshop was funded by the University of Nebraska Lincoln through the INTSORMIL project and organized by the Tanzania Food and Nutrition Centre (TFNC). The group was able to prepare sorghum rice (pilau), coconut flavored porridge and other various sorghum based foods.

One of the training sessions took place in the Mtwara region which is 600 km from Dar-Salaam and located in the Southern part of Tanzania, bordering Mozambique. The region is among many rural areas of Tanzania with higher rates of malnutrition, mainly malnutrition among children and women. Sorghum (food) and cashew nuts (cash) are the main crops in the area. Sorghum is mainly used for preparing alcoholic and non-alcoholic beverages and less used as food. The sorghum crop grows well in the district but it has not been fully utilized both as a food and as a cash crop mainly due to inadequate knowledge on product development.



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FROM THE AMERICAN PEOPLE

INTSORMIL Promotes Farmer Entrepreneurship in Nigeria

By: Dr Angarawai Ignatius

During the INTSORMIL 2010 West Africa Regional workshop in Burkina Faso a strategy was developed to accelerate the transfer of sorghum and pearl millet production technology to farmers. A “farmer entrepreneurship” project was deployed in the West Africa countries of Burkina Faso, Ghana, Mali, Nigeria, Niger, and Senegal. The project is based on the premise that farmers are entrepreneurs and when provided seed and technology they will grow improved varieties and sell the excess grain in the marketplace to local food and feed processors and regional markets. Lake Chad Research Institute identified the farmer Mal Kamisu of Da’azigau Nangere local government through Yobe state Community-based Agriculture and Rural Development Programme. The approach yielded significant interest whereby the farmer was able to plant 6 ha of land during the 2010 rainy season located at Da’azigau to the popular pearl millet variety LCICMV-1, otherwise known as SOSAT-C88, and harvested 8 tons at the cost of \$2,100. Realizing the gains from his sale he had expanded production by 40% (from 6ha to 10ha) during the 2011 rainy season. Construction of storage facilities located near the road for easy access to transportation/marketing is currently underway. Mal Kasimu who spoke in Hausa language, during recent field visit (15th August 2011) expressed delight and thanked INTSORMIL management for this initiative as this project had enhanced his entrepreneurship to produce more grain and was able to obtain grain storage facilities to store his abundant harvest and later sell his grain on the market when the price is high.



INTSORMIL Scientist Receives Award

INTSORMIL PI and former INTSORMIL student, Ricardo Maria, has been selected as a Fellow for the Leadership Enhancement in Agriculture Program (LEAP) of the Norman E. Borlaug International Agricultural Science and Technology Fellows Program. The Borlaug LEAP Fellowship honors Nobel Laureate Dr. Norman E. Borlaug who has been hailed as the father of the Green Revolution. Credited with saving millions of lives, his work virtually eliminated recurring famines in South Asia and helped global food production outpace population growth. Dr. Borlaug’s distinguished career epitomized the qualities of leadership, scholarship, scientific achievement, international cooperation, mentoring, and passion.

“Ricardo was one of only a few outstanding graduate students who was recognized for promise and potential. Through his application and interview, he showed strong promise as a leader in the field of agriculture and his research has potential to make an impact in developing countries and honor Dr. Borlaug’s achievements.” as stated by Maria’s award letter.

The Fellowship award of USD \$20,000 will be allocated as a subgrant to Maria’s US Mentor’s institution. Maria will be studying under Professor Charles Wortmann in the Department of Agronomy at the University of Nebraska-Lincoln in 2012. Funding for the Borlaug LEAP Fellowship is provided by the United States Agency for International Development.

Food Training continued..

Through these training workshops (sorghum processing) participants in groups or as individuals will be able to use sorghum to produce different food products for direct family use and or sell them to earn income. The village leadership commended UNL and the INTSORMIL project for the knowledge boost, as one of them said, "Processing sorghum not only will increase use of sorghum as food but will increase our household income through sales of the processed products and therefore poverty, hunger and malnutrition will become history."

The identification of the two groups was done by conducting a needs assessment study (level of processing knowledge, type of training, registration, processing equipment etc.) The needs assessment questionnaire was developed and administered to the target community and also to project members (i.e. Nzasa women group, TFNC, SUA, Ilonga Agricultural research center and GCLA.) The information was used as a base for the development of training materials. The concept came from the idea to produce and from the idea of product to profit the was used. Two groups, one from a rural area,ie Kitangari Tulinge Women Development Association (KITUWODEA) and the second group (GTG from Dar-es-Salaam) a Pentecostal church based group received phase one of the UNL-INTSORMIL sponsored training workshop.



Former INTSORMIL Scientist Featured in *Journal Star* News Article

INTSORMIL former scientist Dr. David Andrews was featured in the Aug. 7, 2011, Lincoln Journal Star for his development of several ornamental millet varieties. Andrews worked with INTSORMIL from 1985 to his retirement from the University of Nebraska-Lincoln.

After his retirement Andrews began to experiment with ornamental millet varieties. This interest stemmed from a unique purple pearl millet variety Andrews found while studying in India in the 1980s. The plant was not suitable for grain, but he kept it to allow students to study the genetic differences. After encouragement to develop the unusual variety further for the ornamental market, Andrews created Purple Majesty, winner of the 2003 All-America Selection Gold Medal.

The Purple Majesty variety grows to be 4- to 5-feet tall and has vibrant purple leaves with a red midrib down the center of the leaves and long, narrow "bottlebrush" seed heads. Along with Purple Majesty, Andrews has developed three other millets: Purple Baron, Jester, and Jade Princess. Purple Majesty can currently be found locally in the Sunken Gardens in Lincoln, Nebraska.

Woman in the Forefront of Household Food Security in Zambia

By: Medson Chisi

In general, there has been a great concern by governments in developing countries on the status of women in agricultural policies and Rural Development Programmes. The concern by policy makers and governments is that these programs have tended to discriminate against women in most Third World countries, especially those in Africa, but



favored the men folk and yet women are the major food producers. It is argued that women are denied equal access to means of production such as land, credit, appropriate technology and extension services.

In Zambia, there are consistently more females than males in the agricultural households. With a predominant rural population, it is not surprising that there are almost twice as many heads of household in rural than urban areas. Distinction of household heads by sex is important because it is often associated with aspects of household welfare. For example, female-headed households are typically poorer than male-headed households. Men are generally responsible for governing the access of each family member to household and farm resources. They are able to command female labor, decide upon the use of the fields, and decide upon the spending of income. Women most often cannot make any decisions in the absence of their male partners.

Realizing the role that women have in securing food for their families, various programmes have been designed to change policies and mindsets to realize this fact. Slowly it is now being accepted that women have a crucial role to play in the fight against hunger.

Barring other factors, the sorghum research programme has witnessed an increasing role of women in its activities of transferring improved technologies to small – scale farmers that are generally resource poor and living in marginal areas. Improved varieties and management practices when adopted by farmers have had a marked improvement on the lives of these farmers and their households.

The programme has a marked presence in Region I (Sesheke, Kazungula, Sinazongwe, Siavonga, Rufunsa, Luangwa and Masumba). The programme is involved in seed production and distribution at the district level. Meetings are held before planting and regular visits are made in collaboration with other stakeholders such as NGO's and marketing dealers. It is at these meetings that women's presence is clearly noticed and also during



field days. The women are keen on learning new methods of maximising production to meet the food needs of the family while in most cases the men are interested in the surplus to market the grain.

In general women are concerned with issues of food security, health and school fees. As a way of increasing sorghum adoption, the programme has promoted the crop through production contests with prizes. Needless to say most of the prizes were won by women. A woman small – holder farmer of Rufunsa that grew an improved variety 'Sima' and got the first prize realized 4.5 tons per hectare with minimal inputs as opposed to less than 0.5 tons per hectare with local landraces. The programme is proud of all the women that have adopted the improved technologies and are now food secure!

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