



DEVELOPING ENTREPRENEURSHIP, THE TANZANIA EXPERIENCE: SUA-INTSORMIL PROJECT

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BACKGROUND INFORMATION

- **Sorghum in Tanzania**

- **Importance of sorghum in Tanzania**

- ~ Ranked as third important cereal after maize and rice
 - ~ Production stands at about 700,000 tonnes per year
 - ~ The most draught resistant cereal (hence suitable for semi-arid areas: Dodoma, Singida, Shinyanga etc)

- **Sorghum utilization in Tanzania**

- ~ Primarily used for porridge and thick porridge (*ugali*)
 - ~ Only a small portion is commercially processed into flour (about 300 tonnes per year)
 - ~ About 1,000 tonnes is processed into opaque beer (Kibuku)

BACKGROUND INFORMATION ...

- ~ TBL (Arusha branch) has introduced a sorghum based clear beer known as “Eagle”
- ~ Sorghum consumption in urban areas is increasing rapidly due to increased awareness of the benefits of sorghum for diabetic people

o Limitations to sorghum utilization in Tanzania

- ~ Negative attitude: many people consider sorghum as inferior to maize and rice (hence a poor man’s food)
- ~ Improved varieties are high yielding but a number of consumers prefer local varieties because of palatability
- ~ Shortage/lack of appropriate machines to process sorghum into High Quality Sorghum Flour (HQSF), particularly de-hullers

BACKGROUND INFORMATION ...

- ~ Big entrepreneurs still reluctant to invest in sorghum business
- ~ Lack of HQSF in the market place

The SUA-INTSORMIL Project

- **Project Title:** *Building a Sustainable Infrastructure for Product Development and Food Entrepreneur/Industry Technical Support: A Strategy to Promote Increased Use of Sorghum and Millet in East Africa*
- **Countries involved:**
 - ~ **USA:** University of Nebraska-Lincoln (UNL)
(Department of Food Science and Technology and the Food Processing Centre)
 - ~ **Tanzania:** Sokoine University of Agriculture (SUA)
(Department of Food Science and Technology)
 - ~ **Zambia:** University of Zambia (UNZA)
(Department of Food Science and Technology)

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- **The Research Team:**

~ The Research Team is comprised of 11 researchers:

USA

Dr. D. S. Jackson

Dr. C. L. Weller

Dr. R. A. Flores

Tanzania

Prof. J. J. Mpagalile

Prof. H. S. Laswai

Mr. J. R. Makindara

Dr. W. R. Ballegu

Mr. O. Mella

Mr. S. T. Kundi

Zambia

Dr. J. Lungu

Mr. N. Mkandawire

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- **Research Sites in Tanzania:**

- ~ Morogoro region

- (Morogoro Urban, Morogoro Rural and Kilosa districts)*

- ~ Dar es Salaam region

- (Temeke, Ilala and Kinondoni districts [municipals])*

- ~ Dodoma region

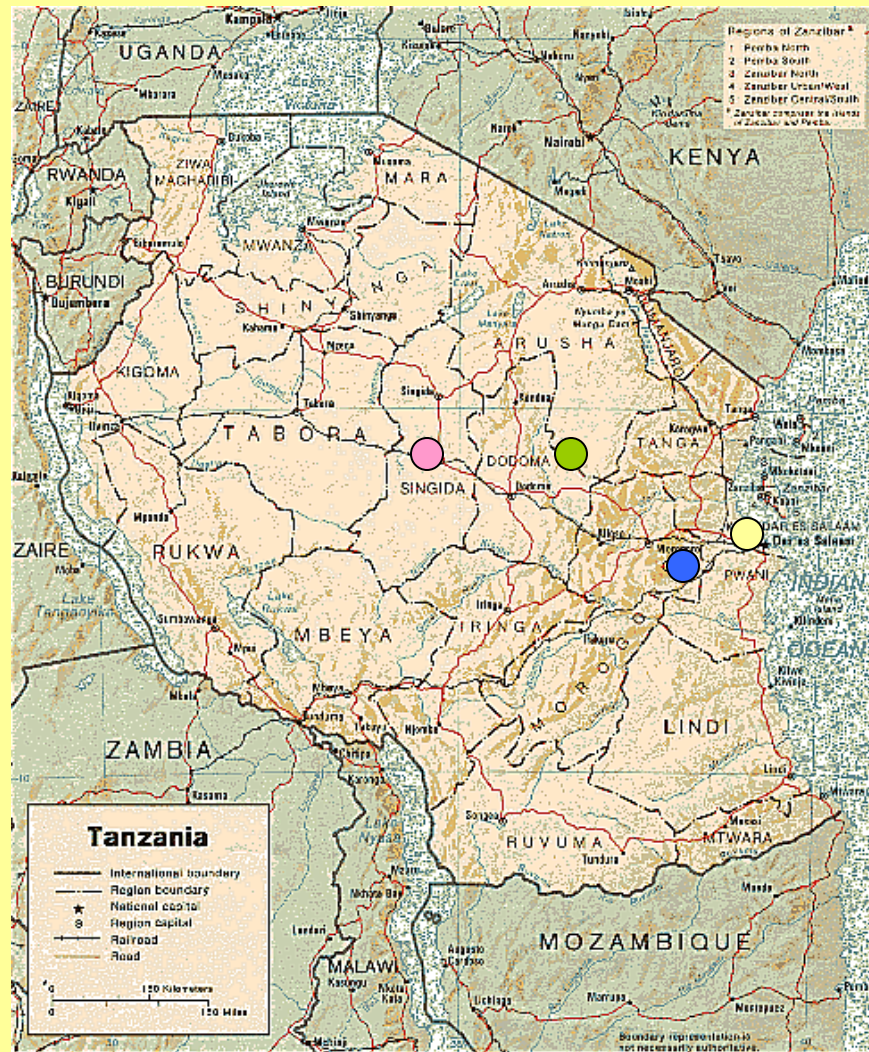
- (Dodoma Urban, Chamwino and Mpwapwa districts)*

- ~ Singida region

- (Singida Urban and Singida Rural districts)*

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Map of Tanzania showing the research sites



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- **Objectives:**

- **Long Term Program Objectives**

Development of successful entrepreneurial businesses that add-value to sorghum and millet such that:

- ~ Farmers have an established outlet for cash sales of high-quality sorghum and millet.
- ~ Small businesses or cooperatives develop processing capabilities enabling the incorporation of sorghum and millet into a wide variety of food products.
- ~ Markets and market channels for sorghum and millet-based products develop.

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Further develop research, extension and marketing expertise of National Agricultural Research Institutes program scientists and professionals so that they can:

- ~ Offer business and technical assistance to processors and small businesses in order to speed development of sorghum and millet food products.
- ~ Advise producers on which grain type(s) are ideally suited for particular end uses, including both very small entrepreneurs, regional and village level millers, and larger multinational brewers (among others).

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- **Research Strategy and Approach:**

Within the 5.5 years period of this grant, the team (UNL, SUA and collaborators) is assisting entrepreneurs to develop sorghum based foods by employing several strategies.

1. Refined and modified existing entrepreneurship educational materials from UNL/FPC and SUA
2. Developed market evaluation strategies and outlined approaches to known channel impediments.
3. Team Visit to Tanzania: Food Entrepreneurship: Sorghum and Millet Foods Workshop

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4. Linked Entrepreneurs with Needed Business and Technical Assistance
5. Resource Allocation and Progress Evaluation
6. Second Workshop Presentation – Further Project Assistance

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- **Project Implementation:**

- **Activities carried out**

- ~ The activities carried out fall under six categories;

- 1. Training of processors

- 2. Training of farmers

- 3. Training Workshops (all stakeholders)

- 4. One-on-one assistance to processors

- 5. Scaling-out (reaching more stakeholders)

- 6. Dissemination of proven technologies/techniques

- ~ **Training of processors**

- Processors trained on the basics of *Idea to Product* (technology part) and *Product to Profit* (entrepreneurship part)

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- * Dar es Salaam: January 2006 (involved 32 participants)
- * Dodoma: February 2006 (involved 34 participants)
- * Dodoma: September 2009 (involved 14 participants)
- * Dar es Salaam: April 2009 (involved 12 participants)

~ **Training of farmers**

Farmers are trained on best postharvest practices to obtain high quality sorghum grain (safety of consumers and better prices)

- * Morogoro: January 2006 (involved 38 participants)
- * Dodoma: February 2006 (involved 32 participants)
- * Mpwapwa: September 2009 (involved 30 participants)

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~ Training Workshops (for all stakeholders)

These are Workshops aimed for all stakeholders (farmers, small-scale processors, medium-scale processors, traders etc)

- * Dar es Salaam: Theme **Networking of Sorghum and Pearl Millet Stakeholders along the Value Chain**, May 2009 (30 people)
- * Morogoro: Theme **Preparation of High Quality Sorghum Flour**, December 2009 (32 people)

~ One-on-One Assistance to Processors

Involves visiting the processors (one-on-one) at their respective premises to address their specific problems.

- * Assisted TOTOMIX (a donor funded project under the Turiani Hospital, Morogoro) to develop new sorghum-based formulations of nutritious flour (**Lishe**). Used in their Nutritional Rehabilitation Ward (for severely malnourished children).

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- * Assisted Intermech Engineering to re-engineer a sorghum de-huller (based on a Canadian design). Two such de-hullers have been distributed to women sorghum processing groups (Dodoma and Dar es Salaam) and one to TOTOMIX
- * Continuous (regular) assistance to existing processors (on their respective work places: Morogoro, Dodoma and Dar es Salaam)
- * Assisted new processors on how to prepare their Business Plans

~ **Scaling Out (reaching more stakeholders)**

- * In 2008 and 2009 we identified new sorghum farmers and processors to join the project (Dodoma, Singida and Dar es Salaam)

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~ Dissemination of proven technologies

- * Prepared training materials (new ones and translation of existing ones) (2006)
- * Participated in various Zonal Agricultural shows. Done by the SUA project team and/or processor groups (2006, 2008, 2009)
- * Participated in a show organized by the Tanzania Commission of Universities (TCU). A total 54 universities from Tanzania, Uganda, Kenya and China participated (2007)
- * Participated in a trade fair organized by the Board of External Trade (BET). One group participated (2008)
- * Prepared 4 leaflets (swahili language) on: *sorghum and its advantages, sorghum based recipes, entrepreneurship for food based businesses, and production of HQSF* (2010)

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- **Activities for the remaining time**

- ~ Continued support to existing processors (Morogoro, Dodoma, Dar es Salaam and Singida regions)
- ~ Recruiting additional small- medium- and large-scale processors from at least 3 new towns (Arusha, Lindi and Mtwara).
- ~ More trainings to farmers on the best postharvest practices to obtain high quality sorghum grain.
- ~ Create linkages, coordinate and discuss project successes with local authorities at district and regional levels in district/regions we work (for post-project long term sustainability)
- ~ Continue to host UNL project representatives visiting Tanzania on project activities

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- **Outcomes**

- ~ Production of a new sorghum based formula at TOTOMIX
- ~ Production of a re-designed sorghum de-huller by Intermech Engineering
- ~ Increasing knowledge and awareness among processors on the preparation of HQSF

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- **Project Impacts**

- ~ Increased availability of sorghum products in the supermarkets
- ~ We are receiving more requests to join the project from sorghum farmers outside our project sites
- ~ There is evidence of presence of a wide range of sorghum products in the market than before
- ~ Increased awareness on the part of policy makers on the importance of sorghum

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- **Way Forward**

- ~ Up-scale and out-scale (nationally and regionally) the positive outcomes of the project
- ~ Disseminate widely (nationally and regionally) the positive findings of the project
- ~ Combine (or increasing the collaboration) the two INTSORMIL projects at SUA into one big project that will holistically address problems facing the sorghum/pearl millet value chain and the effect of climate change





**Thank
You**