



Improvement of farmers incomes through improved processing of sorghum and millets in West Africa

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Background

- Purdue University and ITA are very active in the USAID INTSORMIL CRSP Program for promoting the production and the consumption of millet and sorghum in West Africa
- Countries involved in this programme are : Burkina Faso, Mali, Niger, Nigeria and Sénégal



Market-oriented objectives of the INTSORMIL Program on millet and sorghum in West Africa

Objective 1: Increase the supply of high quality grain through the introduction of new production technologies at the farmer level in West Africa

Objective 2: Contribute to the development of the processing sector through technologies improvement , more effective technology transfer to processors, and better links between processors and farmers



Objective 1: Supply of high quality grain

- The main identified conditions to facilitate the introduction of these new technologies for millet and sorghum production in West Africa are:
 - Creation of competitive, value-added products from millet and sorghum through introduction of improved processing technologies;
 - Payment of quality premiums to farmers by processors;
 - Establishment of contracts between processors and farmer's organization (very significant results has been obtained in Senegal through INTSORMIL projects in both farmer-processor linkages, and processing and marketing of millet and sorghum):



Objective 2: Development of the processing sector Ongoing Strategies

The INTSORMIL strategy for Objective 2 is mainly based on a document developed in 2005-7 from an INTSORMIL West Africa regional working group: “Promoting Millet/Sorghum Processed Products for West African Urban Markets Using an **Incubation Approach”**

The keys words for this approach are market expansion and proactive creation of demand on Millet and Sorghum:

- Market expansion of millet and sorghum will:
 - positively affect the dynamics of local grain production
 - farmer’s and entrepreneur’s incomes
 - food security in the region through greater outlets for locally grown grain

- Creation of demand for these staple cereals in urban centers is key for their long-range viability



Context of promotion of millet/sorghum processed products in West Africa

- In larger West African cities, there has been a gradual, but significant, shift in consumer preference from local processed grains to imported products both for practical and social reasons
- Regaining the losses in consumption share as well as increasing the demand of local cereals in urban diets requires:
 - Appropriate grain processing at low cost;
 - Desirable product quality;
 - Similar convenience to other alternatives like parboiled rice or wheat-based bread



Considerations for suitable promotion of millet/sorghum processed products in West Africa

- Processors need to be able to charge prices sufficiently high to provide profits to farmers and to others in the supply chain
- High quality local products will also lead to exports, as is already beginning to occur in the region



Basic to the Incubation Approach

- Just as multi-national food companies must spend time and capital to develop technologies for products and markets, the same applies to the West African Sahelian region - ***entrepreneurs require technical backstopping to create successful businesses***
- This describes the history of ITA's role in millet processing businesses in Senegal, and effort done in this framework by some other countries
- Technologies and products now exist such that entrepreneurs can develop profitable businesses based on millet and sorghum



Global Objective of the incubation approach

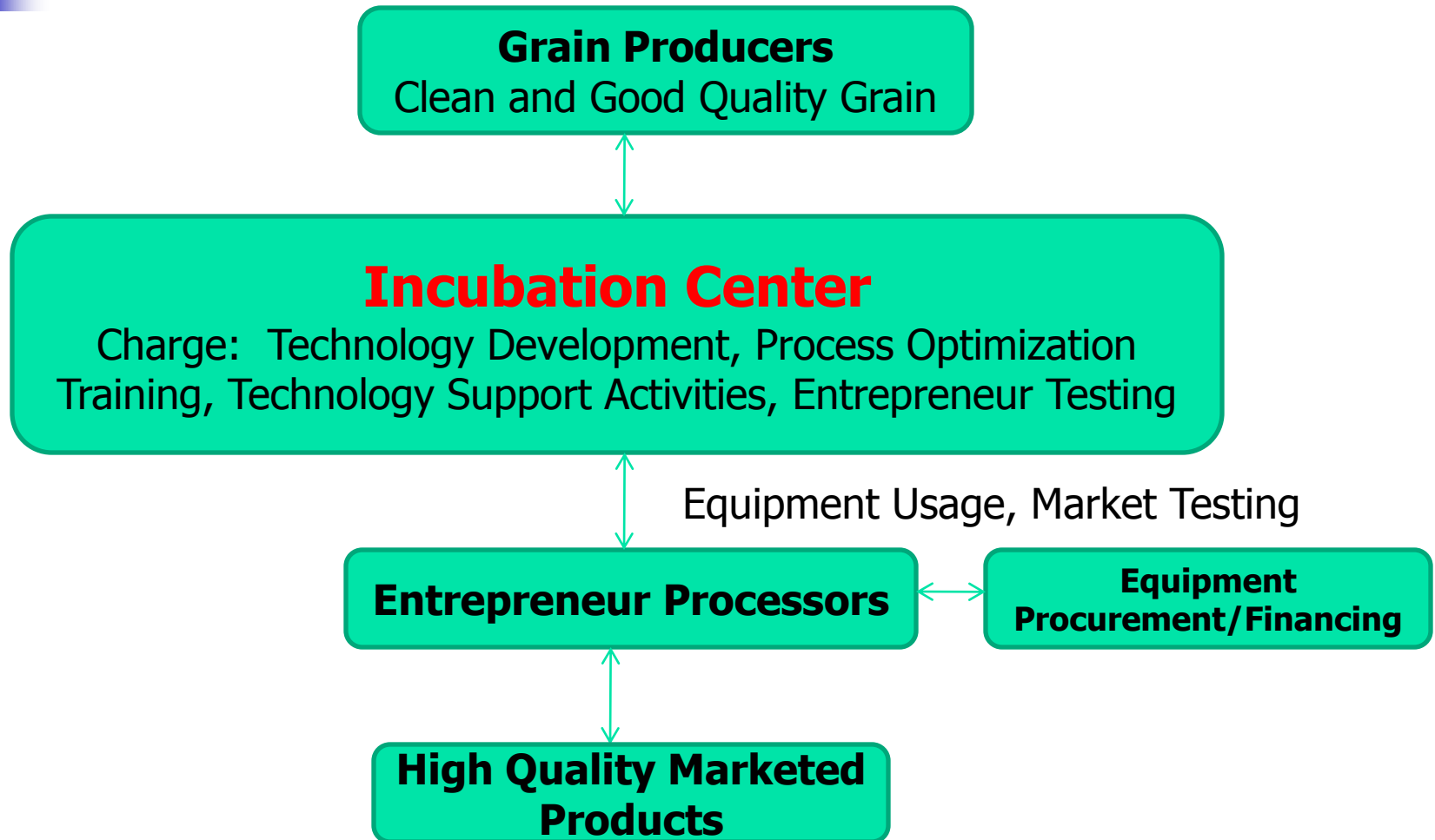
- Develop and expand markets for high quality processed millet and sorghum products in urbanized areas of the West Africa Sahelian region (Senegal, Mali, Niger, Burkina Faso and Nigeria)



Objective of the Incubation Concept

- Provide entrepreneurs with expertise and facilities to nurture and grow food processing enterprises
 - Contains complete processing lines, appropriate in cost and level of technology
 - Detailed training and usage
 - Test markets
 - Continuous feedback and improvement of products
 - Technical backstopping
 - Work with entrepreneur to obtain funding

Incubation Center Technology -Driven Process Development





A case study : ITA Incubation Center – millet/maize couscous

- The ITA Incubation Center on millet/maize couscous has been set with the financial support of two programs:
 - West African Agricultural Productivity Programme (a World Bank Programme)
 - INTSORMIL Program (USAID)
- Purpose - development of new concepts of economic millet/maize couscous processing prepared from semolina instead of flour, as is traditionally used

Millet couscous line set for incubation in ITA (equipment locally built in Senegal)



Agglomerator



Dryer



Steam cooker



Dried Couscous crusher

Traditional method of millet couscous preparation

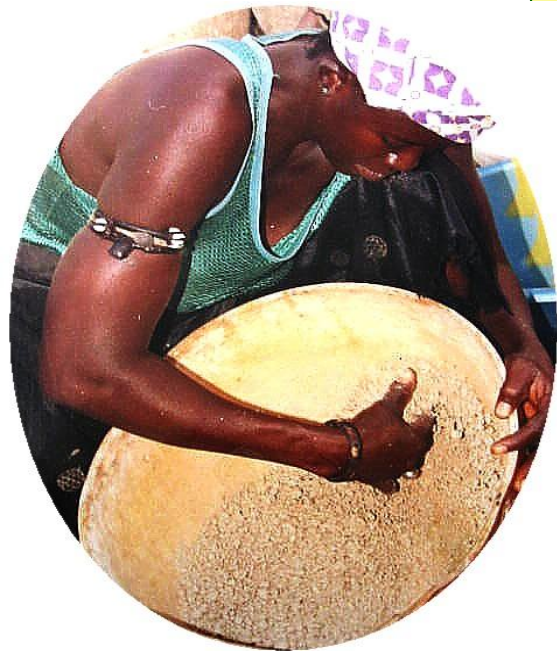
Fine millet flour (Time-consuming preparation)

Time-consuming manual granulation

Steam cooking

Drying at open air

Dried couscous





Approach for the development the new economic millet couscous

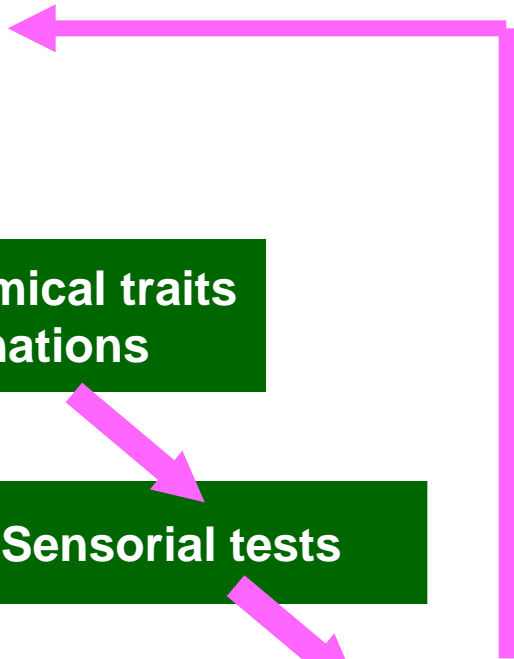
Millet semolina particle sizes
(semolina more easy to granulate)



Physicochemical traits
determinations

Sensorial tests

Focus and market tests



New couscous products



Focus tests on the new economic couscous



Transfer of the new couscous technology to entrepreneurs

- Entrepreneurs to be hosted for an incubation at ITA :
 - by producing economic couscous for both millet and maize INTSORMIL Program (USAID)
 - with their new packaging design ↗





Conclusion

- with this outreach, it is now possible for big scale production of millet and sorghum couscous to use available equipments for wheat couscous without any adaptation
- Incubation seems to be a real approach to bring potential entrepreneurs in food processing activities based on local African products



THANK FOR YOUR KIND ATTENTION

