INTSORMIL Responds to Emerging Grain Markets in West Africa

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According to Lloyd Rooney, Distinguished Professor of Food Science at Texas A&M, "A consistent, high quality grain supply is the first prerequisite for the development of the food processing industry in West Africa." The International Sorghum and Millet (INTSORMIL) Collaborative Research Support Program in West Africa is helping farmers produce a consistent supply of high quality sorghum and millet that meets the requirements of industry.

INTSORMIL's Marketing-Processing Project, funded by USAID/WARP and directed by Botorou Ouendeba, Nigerien millet breeder and former Coordinator of the West and Central African Millet Research Network is responding to the emerging market demand by promoting the development and transfer of sorghum and millet technology that increases production to meet the needs of the food and feed processors. This involves increasing the supply of clean millet and sorghum grain so that the food industry can process food products such as steamed millet in yoghurt, couscous, arraw, degue, sankal, thiackri, and other products. A key component of this project is the strengthening of the bonds between the producers (farmers) and the animal feed and food processors.

From 1998 to 2004 consumption of chickens (see photo below from the Baobab firm in Niamey, Niger) increased from 25,000 to 50,000 daily in the West African city Ouagadougou, Burkina Faso. This is an indication of the demand for poultry feed in West Africa which translates to a demand for sorghum.

Broiler chickens feeding on sorghum

Why sorghum? Sorghum has an advantage over maize in feed as maize frequently contains aflatoxin. To compete with maize in price it is necessary to more rapidly introduce improved sorghum/millet production technologies. The project promotes the transfer of new technology and marketing strategies to sorghum producers. In collaboration with the national agricultural research programs in Senegal (ISRA), Mali (IER), and Niger (INRAN), improved seed of high yielding cultivars, inorganic fertilizer, and improved agronomic practices were introduced on farmers' fields in the three countries. The technology transfer was undertaken in collaboration with farmers' groups and ANCAR (Extension Service in Senegal), AMEDD (an NGO in Mali), and FUMA GASKIYA (a farmers' union federation in Niger).

Sorghum and maize

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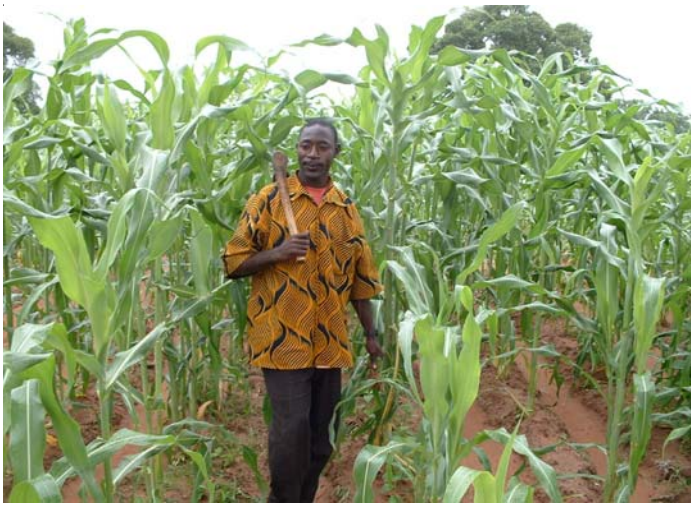
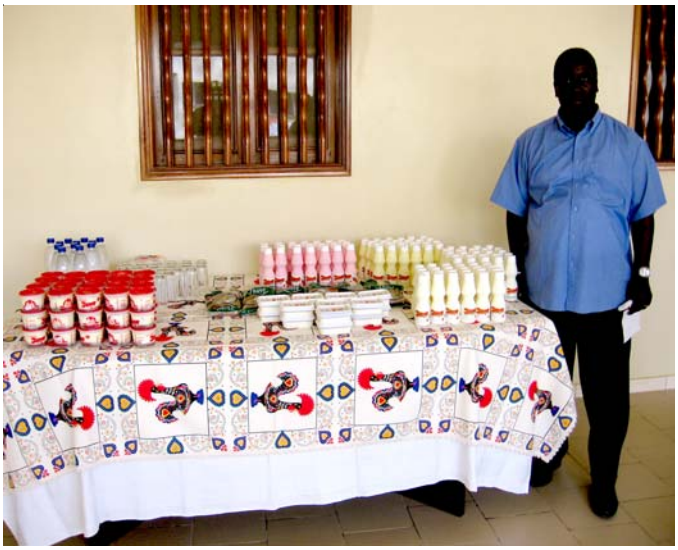
Farmers following the agronomic recommendations (see photo below) consistently got two to two and one half tons of sorghum as compared with less than a ton of sorghum per hectare for other farmers in the region who followed traditional practices. In 2006, this project was expanded to cover a wider area (450 hectares). A water mangement technique, tied ridges, was also included in the mangement package to reduce the risks from low or poorly spaced rainfall.



Marketing strategies play a major role in increasing farm income and in the adoption of technology. To increase farm income sorghum farmers need to introduce new technologies and marketing strategies coupled with higher prices and profitabiltiy from higher input use. The INTSORMIL Marketing Project works with food and feed processors (1) to supply a higher quality product, and as well as pressing processors to pay a higher quality premium and (2) to encourage farmers' groups to get farmers to sell their grain later in the season (to fetch higher prices) and to establish Inventory Credit systems to lend them money so that they can pay for their expenses at harvest but still retain ownership of the grain. Today, the traditional grain supplied in the Sahel has on average 15% impurities. To increase grain quality the project is promoting the threshing of sorghum and millet on "baches" (tarps), and the use of mechanical threshers. Both get the grain off of the ground and thereby improve quality.



Pierre Ndiaye, Yaourt Jaboot products

Pierre Ndiaye, the owner of a highly successful food processing company, Yaourt Jaboot, in Dakar is serving as a model purchaser for the sorghum sold (farmers first store for own consumption) in the Joal region (25 ha) in the INTSORMIL pilot project. Pierre says that "Sorghum not only makes excellent couscous and thiackri but I can also point out its advantages to diabetics in my advertising. HIV/AIDS is getting so much attention that most people do not realize how important diabetes is as a killer and disabler in Sub Saharan Africa now."

The human food sector is the primary market sector in West Africa for the basic cereal staples of sorghum and millet. The animal feed sector is the secondary market after the food sector has been attended to. The continued introduction of sorghum technologies will allow both the unit output costs and the prices to decline and then sorghum can substitute for maize as the basic cereal for feed in the rapidly growing poultry industry of the Sahel. Sorghum will then have higher demand, and value, as both a human food and animal feed. INTSORMIL developed technologies are targeted toward meeting this increased demand for sorghum.

Winnowing millet on the ground

Sorghum provided by USAID in West Africa

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