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Creating New Markets for African Sorghum Farmers

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Creating New Markets for African Sorghum Farmers

"Increased poultry production improves nutrition and farmers' income in the Sahel"

Poultry feeding on sorghum at a farm in Niger owned by a collaborating entrepreneur in the USAID funded INTSORMIL Marketing and Processing project

"Sorghum has great potential for maize substitution in poultry feed rations as the poultry industry grows in the Sahelian countries"

Lack of international markets for locally grown cereals such as sorghum is a major constraint to economic development for West African farmers. Lack of international markets has traditionally resulted in price declines in normal and good weather years since consumers can only eat so much of a staple. Once consumers have enough of the staple, prices collapse, as there are no other markets. These price declines discourage farmers from using higher input levels and therefore achieving productivity gains. Hence, facilitating the growth of the food and feed processing industries for the basic staples is critical for the rapid economic growth of developing countries.

To address this constraint USAID, in 2005, funded a project under the Initiative to End Hunger in Africa (IEHA). This project focused on transferring new sorghum technologies linked to the market development for feed processors and intensive poultry producers in four Sahelian countries where these sectors are growing rapidly, particularly in Senegal.

Sorghum planted at the recommended density at Maraka, Niger

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Today there are an estimated 500 to 600 intensive poultry producers using concentrates and cereal purchases for intensive, confined feeding in Senegal. The three largest intensive poultry producers and/or feed producers are Sedima, EMA Sanders, and Complexe Avicole de Mbao. In 2004, with favorable relative prices between sorghum and maize, one of these big firms purchased 200 tons of sorghum per month for four months until the supplier could no longer find sorghum at the agreed price. Another of those firms regularly imports sorghum and maize from Mali.

In Niger, the project is collaborating with Harouna Labo and Baobab to expand their poultry business by increasing their access to high quality grain supplies. Labo is the largest egg producer in Niger and competes successfully with Nigerian imports by offering a higher quality product. Following the technical recommendations of INRAN (planting an improved cultivar Sepon 82, application of inorganic fertilizer and improved agronomy) and utilizing the financial support of the Marketing-Processing Project (coordinated by INTSORMIL), farmers doubled their yields getting two tons/ha and more. After farmers set aside their family grain consumption requirements, Labo bought all the sorghum in Gobi from 50 ha for a premium price of 132.5 CFA/kg in 2006.

Poultry feeding on sorghum in West Africa

How does sorghum compete with maize in the poultry rations? The development of non-tannin sorghums removes the principal nutritional disadvantage of sorghum relative to maize. There are now a large number of non-tannin sorghum cultivars available in West Africa.

Today there is more sorghum production technology available than is being applied by farmers. The Marketing–Processing project is using this technology to double sorghum yields (in average and good rainfall years). With higher yields, farmers' costs decline, the sorghum price comes down with farmers still making a profit, and sorghum then displaces maize.

To increase yields, the Marketing-Processing Project reduces the consequences of bad weather by promoting water harvesting harvesting techniques. The gains achieved with higher productivity for the poultry industry then are of substantial benefit to consumers during adverse rainfall years.

There are two distinct advantages of sorghum over maize in semiarid regions. First, sorghum has more tolerance to drought and low soil fertility than maize. Second, maize varieties are prone to production of aflatoxin in the field prior to harvest. Aflatoxin is highly toxic to poultry and can cause liver cancer in humans. Sorghum does not produce significant levels of aflatoxins in the field. A very serious health problem is that maize imported from the humid coastal countries and even from developed countries often has aflatoxin

The poultry revolution is one of the most dramatic changes accompanying higher income growth in the entire world. With the declining relative prices of chicken (and more recently turkey) compared with other meats poultry consumption per capita in the USA has been increasing while that of other meats has been stagnant or declining. Similar developments are now occurring in Senegal and will be quickly followed by the other Sahelian countries. Increasing the productivity of sorghum by extending new technologies and facilitating the market growth of this industry has even more potential than most of the export markets for niche crops. Moreover, this development has broad benefits for producers and consumers in the developing countries and helps provide a safety net for consumers during bad rainfall years. In contrast, most export crops only benefit a small sector of specialized producers in developing countries.

Sorghum and other grains at a West African market

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