Introduction

The need for responsive extension approaches to train many farmers in sub-Saharan Africa on improved farming practices has been the preoccupation of many development partners. Sasakawa Global 2000 (SG 2000), which has worked in Africa since 1996, collaborated with the Ministry of Agriculture in Mali to provide extension services in Koulikoro, Mopti, Segou and Sikasso regions.

This extension initiative, which mainly uses demonstration of technologies and training of farmers, has involved hundreds of frontline extension workers, several thousand farmers, service providers and other partners. The SG programs have focused on crop productivity enhancement, soil health, team building, financial intermediation, postharvest handling and agro-processing (PHAP), and provision of market access.

Background

The SG 2000 extension efforts in Mali that focused on the adoption of improved technologies have borne many fruits and created surplus from production of food crops. Farmers faced new challenges such as market access and lack of or insufficient appropriate storage facilities to preserve food products. Poor postharvest handling practices led to low quality of marketable produce. In addition, training meetings were mostly held either in open yards, under trees or in houses of farmers. These meeting conditions were not always favorable or conducive to learning, especially during the rainy seasons and the extreme temperatures of the dry season. Collective rather than individual marketing was seen as one of the solutions for enhancing market access for smallholder farmers.

To address these challenges, SG 2000 Mali initiated the Village Development Centers in November 2006. These centers are locally known as NietaKene. Each is a physical facility established on at least one hectare of land. The basic model of a NietaKene includes a building infrastructure for cereals and seed banks, a marketing store, a meeting room, a processing room, a chicken pen, a phone booth and a toilet. Others are a tree nursery, a drying yard, a fish pond and a water source.

The main objectives for the establishment of the NietaKenes were to:
- Provide communities with suitable facilities for training, meetings and accommodations.
- Foster collective acquisition of inputs through bulking and collective marketing of surplus produce.
- Improve the quality of farmers’ produce to meet the emerging agro-processing and urban consumer market demands.
- Facilitate the building of human capacity in business management, entrepreneurship and leadership.
- Promote the development of income-generating activities among the members of the NietaKene.

In every village where SG 2000 worked, there is an informal farmer association or a registered producer cooperative. The NietaKenes in the Segou and Sikasso regions of Mali, jointly established by the village cooperatives and SG 2000 since 2007, benefit all members in these villages.
The following requirements are necessary for the establishment of a NietaKene:

- A formally registered village cooperative.
- Availability of at least a 1-hectare piece of officially registered land.
- The willingness of farmers to contribute materials and labor toward the construction of the NietaKene facility and to share PHAP equipment costs.
- The commitment of members to undertake income-generating activities.
- Demonstration of transparency in management.
- Cooperation with other development partners interested in the activities of the cooperatives.

SG 2000 also contributes by way of sensitization among the benefiting communities; monitoring technical aspects, donation of roofing, flooring, doors, windows and general furnishing of the facility; strengthening management skills of cooperative leaders; training farmers; offering input loans; and providing machine operators and maintenance personnel. In addition, SG 2000 subsidizes the cost of PHAP equipment acquired by the cooperatives.

Challenges and Solutions Associated with the Establishment of NietaKenes

SG 2000 has had to address the following challenges in the establishment and operation of NietaKenes (five in Segou and five in Sikasso regions):

**Weak motivation of cooperative members to build such infrastructure**

The meager returns on investment on farming discouraged producers from spending time and energy to establish a NietaKene. The bumper harvest in 2005 resulted in low prices offered for staple food crops in early 2006. This discouraged many farmers to invest in farming ventures. Few farmers believed that a NietaKene was the solution to the issue of low returns on investment in farming.

Inter Réseaux AFD and CTA (2009) suggested that, “in order to be effective, farmers and their organizations need to be actors in the initiatives and projects that concern them as they work closely with development actors. Moreover, adequate methods, tools and time are required to communicate and sharing experiences between these different families of actors. Finally, there is a call for preparation and follow-up to maintain the process of development.” SG 2000 thus found it necessary to undertake a series of awareness creations and demonstrations in target villages to achieve its goals. Further training and demonstrations followed to support the process.

**Weak postharvest handling skills**

Before the establishment of NietaKenes, farm products were stored wherever possible without any consideration to the effect of moisture and pests on grain quality. Therefore, most of the products marketed were not of good quality. Moreover, all farmers sold products mainly to retailers only at weekly markets. Demonstrations on the use of millet threshers, maize shells, rice decorticators and grain cleaners at NietaKenes improved farmers’ postharvest practices and allowed producers to send good quality grains to market. National cereal stock exchanges were also used to link producer cooperatives to potential buyers such as cereal dealers, agro-processors, the WFP Purchase for Progress project and seed dealers.

**Capacity building and sustainability**

Formerly, the collaboration between SG 2000 and the cooperatives focused mainly on the demonstration of technologies and group work. The establishment of NietaKenes has led to the cooperatives becoming more and more business-oriented. After completion of the initial infrastructure (cereal banks and marketing stores), cooperative management committees receive training on grain conditioning and business enterprise development. The lessons from the training are applied during national seed and cereal stock exchanges. The cooperatives also use the existing infrastructure and equipment to provide services to other farmers for a fee. The infrastructure and equipment provided could therefore be said to have generated income and profit for NietaKenes.

The sale of products occasionally and individually by partners created a situation that did not favor smooth running and operations of infrastructure and equipment. Consequently, the sustainability of the operations of NietaKenes became an issue. To ensure that sustainability, management committees were familiarized with service delivery and income generation with existing assets throughout the year. Managers were expected to be engaged by NietaKenes to run each facility as a real agro industry enterprise.

**Success Factors for NietaKenes**

**Storage capacity**

The storage facilities installed in the NietaKenes have improved the capacity of members to sell their produce in bulk and together. The bulk storage has created a market for products and an opportunity for members to negotiate prices. At least 50 metric tons (MT) of grain are sold each year together through the National Cereal and Seed Stock Exchanges, the warrantage system, the Purchase for Progress (P4P) project, and direct contracts with cereal dealers since the establishment of the 10 NietaKenes in 2007. Table 1 shows the quantity of grains sold through the National Cereal and Seed Stock Exchange from 2007 to 2009.

**Access to financial resources**

The African Development Bank (BAD, 2005) stated that “access to credit and to other financial services is a determinant factor in improving the livelihood of subsistent farmer population in the agricultural sector.” The storage
capacity and marketing opportunities provided to members of NietaKenes enabled them to more easily access credit from financial institutions such as the Malian Bank of Solidarity (BMS), the National Agricultural Development Bank (BNDA), Kafo Jiginew and Kondo Jigima. Managing committees are thus able to pre-finance members and wait for the appropriate time to market farm products.

Market access
The use of equipment at the NietaKenes has improved the quality of grains and subsequently attracted more and more potential buyers. Compared with other producers in the surrounding villages, members received premium prices from sales of grains. DANAYA, a well-known agro-processor in Bamako, and the P4P project paid 10,000 and 20,250 CFA francs, respectively, as premiums per MT to members for the quality products delivered on time to these companies.

Improved marketing skills and income
“Improved product marketing is a key factor to increased farmer revenue” (Inter Réseaux AFD and CTA, 2009), hence the need to put a high priority on marketing activities. The training received at NietaKenes has improved the negotiating skills of the cooperatives. The ability to safely store quality grains for a long period of time coupled with access to credit has put producers at NietaKenes in positions to bargain and obtain better prices for products. The result is that producers are able to get better prices through collective marketing. Better prices mean increased income and improved livelihoods for members. For example, during the first National Cereal Stock Exchange, held in Bamako in 2006, the price of maize moved from US $180 to US $220 per metric ton. Rain-fed crop prices thus experienced a significant rise (Table 2).

Lessons Learned
The experiences of NietaKenes have clearly demonstrated that the provision of basic infrastructure and postharvest equipment that is managed by well-trained and committed leaders at the village level could be the real engine for economic development and growth. Therefore, to achieve any real development in Malian agriculture, producers may need to acquire basic postharvest handling equipment and knowledge. Such information and equipment could easily be acquired in the NietaKenes and replicated at the village level for the overall economic growth of Mali.

Table 1. Quantity of grains sold yearly by NietaKenes through the National Cereals Stock Exchanges.

<table>
<thead>
<tr>
<th>Main commodities</th>
<th>Quantities (MT)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2007</td>
</tr>
<tr>
<td>Millet</td>
<td>172</td>
</tr>
<tr>
<td>Sorghum</td>
<td>68</td>
</tr>
<tr>
<td>Maize</td>
<td>375</td>
</tr>
<tr>
<td>Rice</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>637</td>
</tr>
</tbody>
</table>

Source: SG 2000 Mali field data. Drastic reduction in grains sold in 2008 is the result of the poor harvest in 2007

Table 2. Annual incomes generated in NietaKenes through sales at National Cereals Stock Exchanges.

<table>
<thead>
<tr>
<th>Main commodities</th>
<th>Amounts (CFA francs)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2007</td>
</tr>
<tr>
<td>Millet</td>
<td>21,500,000</td>
</tr>
<tr>
<td>Sorghum</td>
<td>7,820,000</td>
</tr>
<tr>
<td>Maize</td>
<td>46,875,000</td>
</tr>
<tr>
<td>Rice</td>
<td>6,600,000</td>
</tr>
<tr>
<td>Total</td>
<td>82,795,000</td>
</tr>
</tbody>
</table>

Source: SG 2000 Mali field data.

Note: Reduction in 2008 quantities and values is the result of the poor harvest due to rain shortage during the 2007 rainy season.

References

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