

# Feeding the Future

Mali newsletter

February 2016

## Poverty and Climate Change – main challenges

**Agriculture dominates Mali's economy, and the Government of Mali sees it as the engine of rural development, poverty reduction and growth. As of 2009, Mali exceeded its expressed commitment in the Maputo Declaration to spend over 10% of its budget on agriculture; Mali actually spent at least 12% of the national budget on agriculture (FAO, 2013). Drought remains a threat to food production and nutritional security in the country. Mali's agriculture is dependent on rain but rainfall has been erratic over the last decade, hampering economic growth by an estimated 29% (Butt, Mc Carl, Kergna, 2006).**

Economic growth in Mali has averaged 5% for the period 1996-2007 (CIA, World fact book, 2008). However poverty levels have not been reduced to the extent expected and income inequality between the rural and urban areas has increased. Agricultural production in Mali involves subsistence oriented and rain-fed production of millet and sorghum as well as commercially oriented production of cotton and rice. Most of the investment in Malian agriculture has been allocated to cotton and rice production while much less emphasis has been given to the development of dry land crops, such as pearl millet, sorghum and cowpea. This has resulted in an increase in yield for commercial crops but no increase in the yields of major cereal crops, millet and sorghum, for the last 40 years.

Fighting poverty and the negative impacts of climate change are therefore the main challenges for agricultural and economic growth in Mali. Successful agricultural research projects have made available climate change adaptation and mitigation technologies, such as drought resistant crop varieties, improved fertilizer application methods (micro-dosing, fertilizer point or deep placement), green water harvesting techniques, and soil and water conservation practices (contour lining, stone lining, terracing, grass strips etc.) and crop management practices (line planting ridging etc.).

The Sasakawa Africa Association, through its country program, SG 2000-Mali, promotes agricultural extension services in Mali in collaboration with the Ministry of Agriculture and Rural Development. The country's agricultural extension services are characterized by the presence of several public and



**Mali's National Director of Agriculture speaking to a local group of women farmers**

private partners, where the role of associations (farmers' organizations, associations of producers, and cooperatives) is essential.

The main objective is to engage the local extension services in disseminating climate-smart agricultural practices, while mitigating natural disasters such as recurrent floods and/

or droughts and associated crop failure or decrease in yields, to which resource-poor farmers are often more exposed and almost always more vulnerable. Already this partnership has brought changes in enhancing production yields through the introduction of improved crop varieties, micro-dose fertilizer application, and good soil and water management practices.

## Working with our partners

**An essential feature of SAA's program in Mali has been the development and implementation of collaborative projects with several partners including the Alliance for a Green Revolution in Africa (AGRA), USAID, World Food Program (WFP), and the Royal Dutch Embassy in Mali.**

The use of mineral fertilizers and improved crop varieties by smallholder farm families is limited by the availability, or access to, financial resources. Most farmers are not able to afford the cost of fertilizers recommended by the research organizations. The AGRA-funded micro-dose collaborative project, implemented by SAA, was aimed at improving the use of mineral fertilizers by smallholder farmers. From 2010 to 2013, 77 villages and 31 farmer-based organizations (FBOs) participated in micro-dose fertilizer demonstrations. Thirty-seven extension agents were trained as trainers and supported, in turn, the training of 3,744 farmers. The practice of micro-dosing fertilizer was applied to 3,700 hectares and contributed to the marketing of a surplus production of 427.9 tons of staple grains.

## A message from the Executive Director

Mali is the only Sahelian country in SAA's portfolio of focus countries; Mali has special problems with drought and climate change as described. For a while now, there have been problems of security in the northern part of the country, with which the Malian Government is still grappling.

SAA, however, is committed to supporting Mali's agricultural development and SAA has certainly seen signs that our program is beginning to make an impact, thanks to our dedicated staff, development partners, and the smallholder farmers of Mali.

Our program in Mali started in June 1996 with a memorandum of understanding signed by the late Dr Norman Borlaug and the Ministry of Decentralisation. The main objective was to provide support to public extension and advisory service agents from the Ministry of Agriculture working at national and regional levels. Our strategy was to capitalise on modern science-based agriculture to advance the cause of food security and contribute to economic growth.

Today, our interventions are aligned with Mali's agricultural development policies, including the Strategic Plan for Growth and Poverty Reduction, the Millennium Development Goals (MDGs), the new Sustainable Development Goals (SDGs) and the program for Economic and Social Development. Our public partners include the National Agricultural Research and Extension System, the Directorate of National Agriculture, the Institute of

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**Newsletter of the  
Sasakawa Africa Association**

*SAA Founders:  
Mr. Ryoichi Sasakawa,  
Dr. Norman E. Borlaug,  
President Jimmy Carter*

## Meeting the objectives of the Strategic Plan

SAA Mali has been working to meet the vision, mission and objectives of SAA 2012-2016 Strategic Plan, to contribute to improving food security and increasing income among small holder farmers.

To attain the objectives of the strategic plan, SAA implements five thematic programs: crop productivity enhancement; postharvest and agro-processing; public-private partnership and market access; human resource development; and Monitoring, Evaluation, Learning and Sharing (MELS).

The Agricultural Development Support Program in Mali was set-up to reach at least 100,000 farming households. This involves helping achieve food security for 70,000 farmers (half of whom will be women) and 30,000 commercially-oriented staple crop producers including 1,000 off-farm employment opportunities for women. Four-hundred-and-forty villages have been involved directly in program implementation in Mali.

Overall we have seen a significant increase in the production of food for consumption at home and for sale. The demonstrations in postharvest,

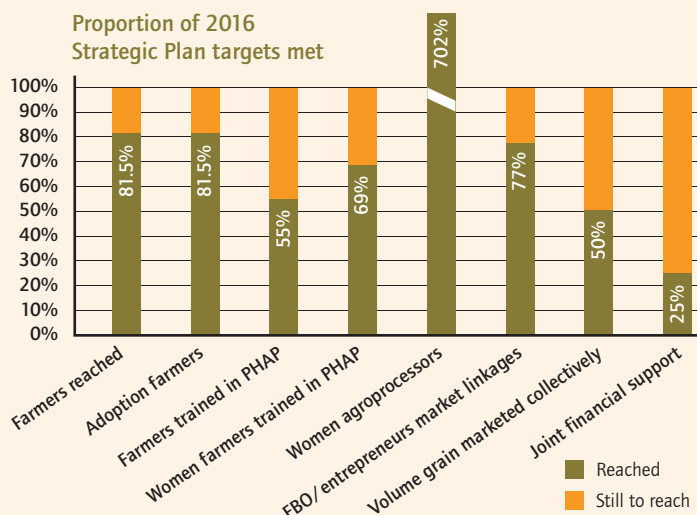
Together our main achievements have been:

- 84,100 farmers (81.5% of the Strategic Plan target) were reached with information on best crop production practices through farmer learning platforms;
- 32,415 farmers (81.4% of the Strategic Plan target) have established Production Test Plots (PTPs) as adoption plots of the introduced technologies farmers through TOPs and WADs;
- 33,964 farmers (69% of the Strategic Plan target) have benefited from training in postharvest and agro-processing technologies;
- 40,608 farmers have been involved in postharvest and agro-processing demonstrations, including 22,468 women;
- 26,400 women farmers benefited directly from the farmer learning platforms;
- 7,020 women agro-processors were involved in agro-processing activities;
- 580 Farmers Based Organizations (FBOs) (77% of the Strategic Plan target) and entrepreneurs were linked to market chain actors;
- 5,000 metric tons of staple grain (50% of the Strategic Plan target) were marketed collectively by FBOs.
- \$50,000 were leveraged (25% of the Strategic Plan target) as joint financial support.

agro-processing, and the linking smallholder farmers to financial institutions gave rise to increased investment by farmers in postharvest and agro-processing techniques, such as multi-crop threshers and groundnut decorticators. In our intervention sites and the adjacent villages, at least 40 000 farmers are now involved in postharvest services' provision.

**Dr Abou Berthe**  
Country Director, SAA Mali

Proportion of 2016 Strategic Plan targets met



### ED message continued from page 1

Rural Economy and the Institut Polytechnique Rural. We are also making progress with FBOs (see page 4).

We, at the Sasakawa Africa Association (SAA), are fortunate that Mali has a strong commitment to agriculture – even exceeding the recommendations of the Maputo Declaration. This is commendable. We, at SAA, are also committed to the long-term efforts of the farming community, which we will continue to support.

**Masaaki Miyamoto**  
Executive Director, SAA/SAFE

## Subsidizing production inputs

In 2012, during the security and political crisis in Mali, SAA Mali implemented the 2012 Emergency Crop Production Support Project funded by the Royal Dutch Embassy in Mali.

The project aimed at supporting smallholder farmers who lost their crops in the 2011 harvest due to drought. The project subsidized production inputs (mineral fertilizers and improved seed varieties) and made these available to vulnerable farmers. The project empowered 256 producers' organizations to

develop revolving funds through the collective selling of their staple grains subsidized by the in-kind reimbursement of 50% of the costs. These revolving funds are still being used by producers' organizations to procure the production inputs for their members.

SAA Mali also implemented a Market Access Project funded by AGRA. The main objective of the project was to increase the income of at least 30,000 farming households through reduced postharvest losses, improved access to credit and increased collective marketing.

Ten Postharvest and Trade Centers (PHT&C) were established where farmers benefit from postharvest handling services (such as threshing and collective storage), credit from micro-finance institutions and banks. This enabled them to aggregate and sell their produce at competitive prices.



SAA staff from the Monitoring, Evaluation, Learning and Sharing theme visit a group of farmers in Zambougou, Mali

## SAA's Value Chain Approach

SAA in Mali has been promoting and implementing a value-chain extension approach for integrated and holistic support services for farming households. The value chain approach helps production and processing both for family food security and for commercially-orientated smallholder farmers. The main focus of the value-chain is the empowerment of family producers by addressing farming constraints from production to marketing and consumption.

Needs assessment surveys are also undertaken in intervention villages to identify the constraints and technological options available for enhancing crop productivity, reducing postharvest losses and improving the quality of staple food crops/products for the market. The low productivity of crops remains a major constraint for the development of efficient supply chains. The crop productivity enhancement and postharvest and agro-processing programs support staple crop producers through the learning platforms. These platforms are venues for practical learning involving: training of extension agents and farmers; on-farm demonstrations and continuous monitoring and evaluation of activities, feed-back and support. SAA provides the inputs required for both Technology Option Plots (TOPs) and Women Assisted Demonstrations (WADs), as well as technical backstopping of extension agents and farmers. The extension agents then provide technical support and supervision to TOP and WAD farmers.

The Postharvest Extension Learning Platform (PHELP) serves as venue for training farmers and agro-processors on improved postharvest handling and storage practices to reduce postharvest losses and add value to their produce. The public-private partnership activities support capacity building of emerging private sector agricultural enterprises, such as input suppliers, processors, farmers' organizations and others. Another example is the input shops established in collaboration with input suppliers, which facilitated the access of farmers to production inputs. These all boost agricultural advisory services to smallholder farmers.



Mali's National Director of Agriculture listening to farmers during a monitoring visit to an SAA supported farm

## POSTHARVEST HANDLING AND STORAGE

Farmers have been producing sufficient staple food products, but insufficient innovation in post-harvest issues, storage and value addition through processing have kept them in the vicious circle of endemic food insecurity and poverty.



In the small Dar Sallam village, millet is packed before storage as part of the postharvest process

The cost and challenge of postharvest losses have led to postharvest and agro-processing promotion becoming the second pillar of the value chain extension model of SAA. Interventions in this area, involve promotion of improved postharvest handling and storage technologies and their associated management.

Among the improved postharvest and agro-processing technologies promoted have been tarpaulins and grain cleaners to produce good quality millet and sorghum, locally produced rice par-boilers and groundnut decorticators by women to add value to their produce. This equipment contributed to a reduction in labour drudgery and increased income for women. The interventions also contributed to improved access of farmers to mechanized postharvest technologies provided by farmers' cooperative enterprises and private service providers. In 2014, SAA introduced hermetic storage facilities which are helping to control insects and pests without the use of insecticides. These include sealed plastic tanks which are now being used for storing staple crops specifically millet, sorghum, maize, cowpea, and groundnuts.

Input suppliers have been linked to the farmers groups in SAA interventions sites to ensure the continued availability of technologies and materials to farmers.

## CAPACITY BUILDING FOR WOMEN FARMERS IN MALI

Women are involved in all aspects of agriculture in Mali, but agro-processing is dominated by women. Currently, women smallholders make up 30% of the labour force in rain-fed agriculture and 100% for irrigated vegetable gardens. Traditionally, women do almost all food processing, starting with threshing and ending with meal preparation. Women are also the main suppliers of processed products to the market. Most women work on their own or in groups and some are employed by small-scale enterprises. SAA Mali's business model builds on strategic entry points for gender empowerment in agricultural development.

Key interventions include:

- 1. Promoting the adoption of sustainable agricultural practices, as well as joint ventures with the private sector, and achievement of quality standards for their products.** This approach draws on Women Assisted Demonstrations (WADs) of the farmers learning platforms with packages encompassing the use of seeds of improved crop varieties and fertilizer micro-dosage, integrated management of vegetable nutrients and diversification of crop varieties. SAA also supports cadres of extension workers to serve as a resource for farmers.
- 2. Supporting farmers and community groups, especially women support and solidarity groups, functional agricultural interest groups, and other agricultural development stakeholder groups.** SAA has been promoting savings and loan associations for women smallholder producer groups. Efforts were also made to support women-led seed enterprises and agro-processing enterprises.



Women farmers are shown the process of parboiling, extending the life of their produce

- 3. Developing more inclusive and efficient markets, based on a value chain approach.** Improved postharvest handling technologies (rice parboiler, groundnut decorticators, and rice mills) were introduced successfully and are being used by women farmer groups. Techniques for processing remain mainly traditional, although more and more women are using millers to lighten the workload of the laborious dehusking and milling grains. Based on the current trends, it is expected that most of the market expansion for food products will come from women, as they improve their organizational skills and improve the quality of the processed products.

## Farmer Based Organisations (FBOs)

Staple food production in Mali is dominated by small family farming households. These smallholder farmers face challenges such as access to credit. They lack information on best practice and markets, and have weak extension services. SAA Mali recognizes that strong farmers' organizations are needed for promoting innovations in staple value chains and has been supporting relevant institutional arrangements along the value chains.

This involves forming and engaging farmers' groups for learning through platforms in both crop productivity enhancements, postharvest and agro-processing innovations. The program has supported larger scale producers' organizations to provide support to grassroots organizations. Farmer-based cooperatives are doing businesses through multi-services centres including the Nièt@kène and Postharvest and Trade Centers (PHT&C). They are offering various services (input procurement, threshing, and milling) to their members. They are managing village level inputs shops, bulking staples (millet, sorghum, and maize) for collective storage and sales and organizing members to access credit, warrantage schemes and other income generating activities especially for women farmer groups.

### Main achievements of FBOs

- 660 FBOs producing staple cereals and legume crops organized in 10 cooperative unions.
- The total members of these FBOs were 20,000 producers including 4,000 women.
- The FBOs support contributed to the establishment of 10 warehouses. A network of 10 agro-dealers has been supported by the program.



Mali's National Director of Agriculture with SAA Mali Country Director, Dr Abou Berthe, during a visit to SAA supported farmers

- From 2012 to 2015, farmers were able to buy fertilizers and improved seeds from 23 inputs shops established through the partnership with agro-dealers.
- The volume of marketed surplus grain production increased by 30 per cent, as a result of training in marketing, financial literacy and collective storage
- Farmers have improved their negotiating skills as the product they offer to the market meets quality standards. Farmers bulking and negotiating the price of their produce can reach up to three times the normal price middle-men and traders would offer.

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