Investing in agri sector top priority: Mali President
Stresses on food sovereignty and family farming

The basis of our economic takeoff is certainly in agriculture and this is clearly a priority,” said His Excellency Ibrahim Boubacar Kéita, President of Mali to Dr David Bergvinson, Director General, ICRISAT, when the latter called on him while on an official trip to Africa.

President Kéita said that 15% of the government’s budget was allocated to agriculture. “We are pleased that many compatriots have understood the importance of investing in the agricultural sector as a source of income and many ‘conversions to agriculture’ are happening to demonstrate this interest,” he said.

The Malian President also discussed climate change and challenges to land and water resources management. “Food sovereignty is important for a country and we appreciate ICRISAT’s work on family farming to help households improve their productivity, nutrition and livelihoods,” he emphasized. Dr Bergvinson spoke about translating the watershed management experience gained from India in West and Central Africa, especially in Mali, to target challenges with regard to water and land management issues.

Dr Bergvinson reiterated ICRISAT’s commitment to support smallholder farmers through a demand-
We are comforted with new development in our collaboration for large scaling up of sorghum, millet and groundnut technologies, adapting to the effects of climate change. The challenge now is to transfer those technologies on a larger scale to family farms,” said Dr Bouréma Dembélé, Director General of Institut d’Economie Rurale (IER).

The discussions between Dr Dembélé and Dr David Bergvinson centered around key impacts and major challenges affecting agricultural production in Mali. “Countries that depend on sorghum and millet for their consumption face great challenges due to climate change. If in the past, the focus has been to look for varieties tolerant and resistant to drought and disease, these days the interest is also on developing agro-industries,” said Dr Dembélé.

The collaboration between IER and ICRISAT currently covers 20 projects involving different aspects of agricultural research for development. Both institutes and partners were able to lead in developing a number of technologies which have impacted farmers’ livelihoods.

Ways to further strengthen the bonds of partnership include capacity building, mentoring and internships. According to Dr Dembélé, the Mali agricultural development policy has two pillars: Cereals and livestock – targeting small-scale farmers and developing of ‘agriculture growth poles’ for rice, maize, millet, sorghum, livestock and aquaculture.

During the meeting, seed certification and release were discussed as key constraints preventing scaling-up of varieties being developed. Another major challenge in Mali is improving household nutrition.

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Mr Gary Juste (center), Mission Director for USAID, Mali and David Yanggen, Director USAID - Malé - Office of Economic Growth, and ICRISAT Director General, Dr David Bergvinson, discussed innovative partnerships for making technologies reach smallholder farmers. The role and importance of mobile technologies in scaling-up projects was one of the key topics discussed. “These technologies will be important in attracting youth and supporting commercial agriculture and help farmers connect to the financial sector,” said Mr Gary Juste.
Learning how to graft mango trees empowers African women of Sadoré, Mali

About 45 minutes from Niamey city is a village called Sadoré. The village is just across the street from the ICRISAT office and is a beneficiary of the diversification program which trains women farmers in tree grafting and raising nurseries.

The women in Sadoré were poor, but by selling the grafted mango trees, they are earning well. They have built new homes; their homes have electric supply and they have TVs and refrigerators. They are also able to pay the school fees for their children and contribute to other needs of their families.

Ms Salamatou Boureima, the secretary general of the Women’s Association in Sadoré says that grafting trees allows them to earn an average annual income of 300,000 FCFA (about US$ 612). Some of the experts in grafting are students from the elementary school in Sadoré who are taught nursery and gardening activities. This activity that now benefits the entire village was due to the initiative taken by ICRISAT technicians and Dr Dov Pasternak (former ICRISAT scientist) who taught the women how to graft, tend to the plants in the nursery and sell them for a good price.

Since 2006, the school was able to gain revenues from grafting. “A grafted mango tree costs about 1,000 FCFA (US$ 2). The activity has drawn clients from outside of Niger, mainly from Nigeria, who are ready to buy them for almost double the price. The money is used for purchasing school equipment,” says the headmaster of the school.

Dr David Bergvinson, Director General, ICRISAT, who is currently in Africa, met the women’s group in Niger.

After more than six years, Conseil Ouest Africain pour la Recherche et le Développement Agricole/West and Central African Council for Agricultural Research and Development (CORAF/WECARD) and ICRISAT took stock of their partnership agreement and decided to renew certain points of its contents to reflect the evolution of the scientific environment in Africa and in the world.

The updated agreement was signed on 27 February 2015, in Saly Portudal in Senegal by Dr Harold Roy-Macauley, Executive Director of CORAF/WECARD and Dr David Bergvinson, Director General, ICRISAT.
When you step into Sarda Bai’s house you can see that her house is different from the barely furnished houses in the rest of Siyalwada village in Madhya Pradesh, India that is inhabited by the tribal group, Adivasi. The TV blares on as the flour mill chugs away; there’s a big granary in the corner to store wheat; in front of the house is a shed for the goats and a buffalo, and in the narrow courtyard, a brand new bike glistens in the afternoon sun. One other thing that stands out conspicuously on the verandah is the red instrument provided by ICRISAT, which her husband uses to measure the water levels in the wells and tube wells in the village and five other neighboring villages.

Amidst all the signs of prosperity, it’s Sarda’s confidence, her efforts to educate her children, and her desire to constantly better herself that shines through. Once looked down by the village folk for walking out of the joint family along with her husband, she is now looked up to as a role model with her neighbors trying to emulate her success. Even her once estranged family has patched up with her.

She grows her own food

Sarda is busy cooking a meal, when we arrive at her place. The vegetables are from her garden, the rotis (flat bread) she is making are made from last season’s wheat and the rice that’s cooking on the earthen stove is from the recent harvest. Even the ghee (clarified butter) she applies on the rotis is in-house, courtesy the buffalo she bought recently.

Breaking away from tradition

She narrates her story fighting back tears. “We had to live in a tiny room, which was our kitchen, bedroom and living room,” she says, as she admonishes her youngest son to finish his breakfast and get ready for school.

In 2011, Sarda Bai and her husband Bhagchand decided to leave the joint family. “My sister-in-law took all the decisions in the home and we had frequent quarrels. I am glad we decided to step out as it helped us grow as individuals, but we had to face a lot to get to where we are now. We were denied our share of land. We worked as farm laborers. When the watershed project started hiring labor, we took up the opportunity. For the first time, I received a wage of ₹ 100 (US$ 1.62), on par with my husband. The previous rate for farm labor was ₹ 40 (US$ 0.65) for women and ₹ 50 (US$ 0.81) for men.”

Starting off with a vegetable patch

“We continued working as farm laborers and at the same time took two acres of land on lease to grow vegetables. It cost us ₹ 20,000 (US$ 323.23). I enrolled as a member of Puja Self-Help Group and acquired a loan. At that time, the NGO, BYPASS (Bhopal Yuwa Paryavaran Shikshan Sanstan) with the aid of ICRISAT Multi-cropping has enhanced Sarda Bai’s earnings. She first invested in a flour mill and later on in livestock. This year her earnings were good and she could hire a goat herder. Sarda is working towards building a bigger house and providing good education to her children.
discussed productivity enhancement trials with the farmers. I was ready to try out the new methods. I learnt how to make vermicompost; through the soil analysis I came to know that my land was deficient in zinc, boron and sulfur and applied the prescribed fertilizers; ICRISAT also supplied us the seed. That year we had a good crop and we sold the vegetables in the weekly haat (market) for a good price.”

“My husband volunteered to measure the water levels in the open wells, tube wells and take recordings from the rainwater run-off recorder. He was paid an honorarium of ₹ 1,000 (US$ 16.16) per month for monitoring six villages. Our income was very little but I made sure my three children went to school.”

A farm at last
“After a couple of years, my husband’s family relented and they gave us 2 hectares of land. On our plot, I adopted ICRISAT’s Broad Bed Furrow system to grow soyabean and chickpea. Previously we were only into single cropping, but in 2013 I started rice cultivation because there was sufficient water available due to the watershed initiative. Soon after the rice harvest, I sow wheat and chickpea. I have adopted this pattern for the past two years.”

Flour mill from farm earnings
“Multi-cropping has enhanced my earnings. I first purchased a small mill. With it, I was earning less than ₹ 50 (US$ 0.81) per day. Now I have a bigger mill and I earn ₹ 150-200 (US$ 2.42- 3.23) in a day. I have a TV at home, so the kids in the neighborhood come to watch TV and also help operate the mill.”

Of goats, gold and more
“From the flour mill earnings, I bought a goat. The goat had five kids in a year. I sold one of the goats and bought gold (shows her mangalsutra set in black beads and gold). My earnings are good, so I hired a goat herder. I also have a buffalo but since my daughter and elder son are studying in a government residential school in a nearby town, there is surplus milk even after setting yoghurt, churning butter and making ghee. This year, I plan to sell the surplus milk at the local milk cooperative.”

A motorbike for the mister
Pointing to the new bike that her husband had purchased, Sarda says, “I earn well, so I don’t take my husband’s money. Last year, seven more wells were dug up under the watershed program and my husband’s monthly income has increased by ₹ 1,000 (US$ 16.16). With the extra money he bought a motor bike. This helps him complete his work in three hours. Now he has more time to help me with the work on the farm.”

Future plans
Sarda has lots of plans for the coming year – “My dream is to build a pucca house with bricks and cement. I want my children to study well. Educated people earn well, get more opportunities to see the world. I wish I could travel to various cities. Thanks to ICRISAT, I travelled by train for the first time to attend the Women Farmers Day held on 12 September, 2014. There I met other women farmers from across the country. I saw the work that is being done and I am proud that I have adopted quite a few of the methods. That one visit has opened up a whole new world to me.”

Story: M Jemima Margaret; Pics: V Nagasrinivas Reddy

INTERNATIONAL WOMEN’S DAY SPECIAL

This watershed project was funded by the Indian Ministry of Rural Development, implemented by an NGO, Bhopal Yuwa Paryavaran Shikshan & Samajik Sansthan (BYPASS) and led by ICRISAT. This work was undertaken as part of the CGIAR Research Program on Water, Land and Ecosystems.

For stories & videos: http://www.icrisat.org/womenleaders-sardabai.htm
Changing the fate of Malian children around a cooking pot

A story about the An Be Jigi 2 project. An Be Jigi means “Hope for all” in Bambara.

Aminata Sanogo, mother of four children, has sparked a cookery revolution among women in her village, N’golobougou, in South Mali. She cooks her Tô (a traditional porridge and a staple dish in rural Mali) with whole grain sorghum. Normally, a woman will be praised if her sorghum grains are perfectly decorticated after half an hour of incessant pounding with the pestle and mortar to remove the outer seed coat. Finding bran in the Tô is not acceptable and results in bitter remarks about laziness. However Aminata’s husband finds the whole grain Tô delicious and often invites people to taste it, jokingly warning that they must “be careful, this is the Tô with non decorticated “grain”.

Aminata has been a facilitator of nutrition courses for the An Be Jigi project for four years, showing women how to cook sorghum and millet grains differently, such as using whole grain, so that the nutrition value of meals is higher as the seed coat contains vital nutrients that are lost when the grain is decorticated.

Malnutrition is widespread in Mali, especially among young children in rural areas. Anemia is particularly severe, and iron deficiency is a major cause, leading to poor child health.

The McKnight Foundation funded An Be Jigi project aims to prevent such malnutrition by increasing iron and zinc uptake through various strategies: selection of iron/zinc-rich sorghum and millet varieties (biofortification), change of cooking and feeding practices and better nutrition education among women farmers, most of whom are illiterate.

Aminata Sanogo and Sitan Sidibe, family nutrition leaders from N’golobougou, Mali.

Cookery session for better nutrition.

The focus of research has been on sorghum and millet, crucial staple crops in the rural Malian diet, providing three quarters of the total energy intake of mothers. While cereals provide about half of the iron intake and up to 75% of zinc intake, the total intake of these essential minerals for child health and development is far below international standards.

About half the mineral content of grain is lost through decortication (44%). Encouraging the use of whole grain would improve the quantity of mineral ingested and also ease mothers’ workload so they could spend more time on child care. However, the bran and seeds are rich in phytates, which are essential for germination and the main form of phosphorus in grain, but inhibit iron and zinc bioavailability.
Yet bioavailability of these essential minerals can be increased by some food preparation methods like fermenting (soaking the grain overnight before milling) and adding vitamin C-rich ingredients locally available, such as tamarind or baobab fruit, which significantly increase iron and zinc uptake. Data shows that these measures could help increase iron uptake in children by over 50%.

“Akadi, akadi!” (good, good!), says Aminata as she sees how enthusiastically the women and children eat the Tô and nutritiously sweet millet and tamarind porridge she has helped the mothers prepare. This is the proof that women can change the way they cook, even the most traditional dishes, to improve nutrition and diet diversity if given the right information.

So, how can we replicate An Be Jigi’s success elsewhere? Aminata has now joined forces with an equally energetic pioneer, Sitan Sidibe, a very active mother of ten children and grandmother of six, to spread the word. Convinced about the impact on children and women’s health, Aminata and Sitan have become nutrition experts for their community. They have just been asked by women from a village 10 kilometers away to organize the same cookery sessions. Even though they are not paid, they will go as they see benefits for themselves, what Aminata calls maaya-juru. In local Bambara language, this refers to making more acquaintances, which is highly valued in the very sociable Bambara culture. Training more women like Aminata and Sitan could create a nutrition revolution in rural Malian families.

An Be Jigi, a multiple research partnership for better nutrition and health of Malian children and women

Women village nutrition facilitators like Aminata have been trained by Food Technologists from the Malian National Agricultural Research Institute, IER (Institut d’Economie Rurale). The Malian branch of the NGO Helen Keller International has provided pictorial training materials about basic hygiene and nutrition messages. Over the 8 years of An Be Jigi project, researchers from ICRISAT were particularly involved in defining the curriculum of field nutrition schools. Other valuable research outcomes of ICRISAT include a sorghum and millet breeding program on iron and zinc biofortification, and an understanding of the impact of grain decortication and other food preparation methods on the nutrition value of staple foods.

Mothers and children enjoy the nutritious Tô.
LAUNCH OF WOMEN LEADERS VIDEOS

It is heartening that positive changes are happening for some women in the rural sector – one of the toughest groups to reach due to the gender and social dynamics, poverty and low education levels in the villages.

Years of research and sustained effort in the area of Integrated Watershed Management is creating a collaborative spirit and changing the lives of rural women in India.

The impact of these initiatives has been captured through a sample study of women in remote villages in Madhya Pradesh, represented in videos being released for International Women’s Day. Get to know these women as they tell about the odds they had to overcome to emerge as leaders in their community.

Hari Bai from Siyalwada village in Madhya Pradesh, India, knows how to deal with a fickle monsoon. The holistic approach of the watershed initiative equips her to help herself and others in her community too. Through the self-help group (SHG) that’s part of the watershed initiative, Hari Bai availed a loan to buy her first goat. She now has ten goats. The SHG also brought out the leader in her – she is the president of Shiv SHG in Siyalwada.

http://www.icrisat.org/womenleaders-haribai.htm

Janki Bai from Dungaria, a remote village in Madhya Pradesh state, India, turned her barren 10-acre field and neighboring drylands into cultivable land by giving up an acre for a water harvesting pond. The watershed project helped farmers conserve rain water; grow new crops and better crops; and above all transformed their thinking.

http://www.icrisat.org/womenleaders-jankibai.htm

Adieu

Mr R Bhubesh Kumar, Assistant Manager, Agri Business Incubator program (ABI), Patancheru, India, concluded his assignment with ICRISAT on 4 March 2015, after over six years of valuable and dedicated service.

Sad news

We are grieved to learn about the sad demise of Dr Dale E Hess on 28 February. He joined ICRISAT in August 1990, as Associate Cereal Pathologist, Millet Program, Niamey, and undertook Pearl millet pathology research on downy mildew and management options for pearl millet and sorghum Striga. He was instrumental in integrated management options and closely coordinated with the regional Pearl Millet and Sorghum Networks. He moved to ICRISAT-Mali in January 1996 to undertake Striga research in sorghum. He worked as Principal Scientist (Pathology) with ICRISAT till October 2001.

Dale, an American national, was Ecological Field Station Director and Associate Professor, Sustainability & Environmental Education Department, Merry Lea Environmental Learning Center of Goshen College, Wolf Lake, Indiana.

Team ICRISAT expresses condolences to all the members of Dale’s family.