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IFAD backs cassava flour in bread and confectionery

Project participants in a group photo at Sheraton hotel during the launch.

The International Fund for Agricultural Development (IFAD) is supporting the inclusion of cassava flour in bread and other forms of confectionery as part of efforts to improve food security and the livelihoods of farmers in sub-Saharan Africa.

This follows the launching in Lagos on 23 July of two projects under IFAD grants: *Enhancing the Competitiveness of the High Quality Cassava Flour Value Chain (HQCF) in West and Central Africa*; and *Improving Quality, Nutrition and Health Impacts of the Inclusion of Cassava Flour in Bread Formulation in West Africa* (Nigeria and Ghana).

The projects will, among others, support the generation, dissemination, and adoption of improved technologies for production and processing; develop and pilot-test a set of integrated best-bet options for HQCF production and promote market access to secondary products; and develop and promote appropriate evidence-based models for sustainable value chain development for African agricultural commodities using HQCF production and processing as an example.

Dr Alfred Dixon, Project Leader of IITA's *Sustainable Weed Management Technologies for Cassava Systems in Nigeria* project, represented the Director General, Dr Nteranya Sanginga on the occasion. He described cassava as a "poverty fighter" and said the two IFAD-funded projects were timely.

Improving the use of the crop, and scaling up/out processing technologies would help Africa to address the issues of poverty and hunger on the continent, he said.

"Africa has a comparative advantage in cassava production… so let us use cassava to get what we want."

Grown mostly by small-scale farmers, cassava is a source of livelihood for about 300 million people in sub-Saharan Africa. However, because the value chain is underdeveloped and the crop spoils relatively quickly after harvesting, farmers are yet to exploit the full potential in terms of livelihood improvement.

Recently researchers from IITA and partners successfully baked bread with 40% percent cassava flour and 60% wheat flour, showing bakers a window of possibilities. IFAD sees this inclusion as a major step that would address food insecurity, create jobs especially for the rural youth, and improve incomes.

Dr Malu Ndavi, Senior Program Officer, IFAD, said, "Our expectation is that these projects will touch the lives of poor farmers." He urged implementers/ partners to work together towards ensuring that the project's goals and objectives are delivered on time.

The 18-month project on increasing impact on nutrition and health will be led by Dr Bussie Maziya-Dixon (IITA) and Prof Michael Ngadi (McGill University, Canada). The 36-month project on enhancing the competitiveness of the HQCF value chain will be led by Dr Adebayo Abass from IITA. Other partners include the University of Agriculture Makurdi, Federal University of Agriculture Abeokuta, Federal Institute of Industrial Research Oshodi, National Root Crops Research Institute Umudike, flour millers, farmers, bakers, and cassava processors among others.

Training & field days on high quality seed yam production organized

In the framework of the West Africa Agricultural Productivity Program (WAAPP), IITA organized farmers' training and field days on high quality seed yam production at the Abuja Station, on 14 and 17 July. The first meeting was for extension agents and farmers of the Federal Capital Development Authority (FCDA). There were 103 participants: 17 women and 86 men. Two categories of trainees were present: 28 extension agents and 75 farmers, from five area councils of the Federal Capital Territory (FCT) - Bwari, Gwagwalada, Kwali, Kuje, and Municipal. On 17 July, there were 39 participants (34 men and 5 women) with 15 extension agents and 24 farmers from the Agricultural Development Project and the Third National Fadama Development Project (FADAMA 3) of the FCT.

Participants learned the advantages of using good quality seeds to enhance their yam production. They also shared their experiences on seed yam production. An experienced farmer who had been using the minisett technology to produce his seed yam said that he used wood ash and crushed neem leaves as treatment instead of the recommended Mancozeb and Chlorpyrifos. There were practical sessions on the minisett technology followed by a field visit where further discussions were held on planting and crop maintenance. In the field, the initial belief that minisetts could not grow (due to their small size) was replaced by curiosity and generated many questions. Some farmers were surprised to learn that yam could be grown on ridges since they had always used mounds. Doubts about

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the minisett technology were settled after the field visits and discussions, and participants left convinced that it was a technology worth trying.

Separate sessions were held with extension agents to brainstorm on reasons for the low rate of adoption of the technology despite its potential to increase the quality and quantity of seed yam production. Some of the reasons given included: lack of or limited knowledge about the technology among both farmers and extension agents (less than 10% of participants had heard of the technology), the absence of markets for seed yams (especially as mostly farmer-saved seeds are used), and a lack of evidence that seed production could be profitable. Extension agents were also introduced to the use of vine cuttings for the production of seed yams.

Dr Beatrice Aighewi, the IITA yam seed system specialist, said that the meetings were well attended and hoped that the farmers and extension agents would advance the use of the minisett technology to boost yam production in FCT.

Left: A farmer demonstrates the use of the minisett technique to other farmers and extension agents.

Below: Extension agents brainstorm on possible reasons for low adoption of the minisett technique of seed yam production technology.

Farmers as researchers for a day: Africa RISING farmers' field day

"Farmers call me a breeder but they are breeders as well," said Wills Munthali, from ICRISAT Malawi, during a farmers' field day in Njoro, in Kiteto district. "Under Africa RISING we work hand in hand with farmers in the selection of improved varieties."

"Previously, we carried out most of our research in the stations and developed high-yielding varieties. But when they were released, their rate of uptake by farmers was low. This was because farmers, who are the end users, were not sufficiently involved," he said. "Africa RISING emphasizes the importance of farmers' involvement in its research and development activities. Their feedback is important in ensuring that the technologies we develop are appropriate, acceptable, and will be adopted."

Organizing farmers' field days is one of the ways in which the project ensures that farmers are involved in its research activities. Farmers are invited to the project's demonstration plots to see the various new technologies being studied and/or being promoted and compare them with their own in their farms. They are also able to help the researchers in selecting the improved varieties which meet their needs and preferences.

This year's first round of field days in Kongwa and Kiteto Districts in Dodoma region were held in May in Njoro village (Kiteto district) and Lakaila, Mlali, and Moleti villages (Kongwa district). They were attended by farmers, village and district officials, and researchers from IITA, CIMMYT, ICRISAT, and Hombolo Agricultural Research Institute.

Some of the crop varieties observed included improved groundnut, sorghum, pigeonpea, millet, and maize. Also showcased were practices to reduce soil erosion, such as the formation of uphill and downhill ridges/terraces (*fanya juu*,*fanya chini*) and intercropping legumes–which fix nitrogen from the air into the soil–with other crops.

Farmers were full of praises for the new technologies on display and in some villages they welcomed the researchers with songs and dances.

Brave farmers

For Hamisi Shabani from Njoro village, this year's event was indeed a turning point in his farming life. "I have a small farm where I grow maize, pigeonpea, and groundnut. I have been farming for almost 4 years now but this is my first visit to a demonstration site to see and learn about improved farming methods. Many thanks to all the organizers of this program. I will be a brave farmer and implement what I have learned from the demo plots," he said.

Samuel Mujoweni, the Chairman of Jitegemee Farmers Group, Lakaila in Kongwa village, is one of the farmers on whose farm the project has a demonstration plot. "We have seen ways to increase the production of our farms through the use of early maturing improved varieties and fertilizer. I encourage farmers to use fertilizer and make the terraces (*fanya juu, fanya chini* technology) on their farms to improve the fertility of their soil."

Prisca Safe from Moleti Village in Kongwa district saw the technologies being piloted as a way to free herself and her family from hunger. "I will use the new technologies of intercropping and applying fertilizers," she said.

Taraque from Njoro village was also very positive about the new technologies being introduced. "I receive these technologies with joy. These modern seeds are drought resistant; they mature early and have a high yield and good quality. Being involved in this variety selection through seeing and tasting different varieties is a very good idea. I believe they will have a positive impact on the future generations," he said.

Farmers looking at improved groundnut varieties in Moleti village, Kongwa District.

IITA Southern Africa Hub holds retreat, team building

Southern Africa Hub team members in a team building exercise.

On 21-25 July, about 40 of the staff of IITA's Southern Africa Hub from Zambia, Malawi, and Mozambique converged at the Golden Peacock Hotel in Lilongwe, Malawi, for the Hub's annual retreat.

Dr David Chikoye, Regional Director for Southern Africa, nicely summarized the objective of the retreat exercise, saying, "To walk fast, walk alone; to go far, walk together."

On highlighting the importance of the retreat, Dr Chikoye added, "The [Southern Africa] Hub family has grown significantly since we were formally established in 2009. And as we continue to grow in numbers, the need to come together and work together becomes more and more important if we are to realize our regional and institutional mission and vision—if we want 'to go far'."

To set the tone of the exercise, Dr Chikoye gave an overview of the Hub including its beginnings, current work, lessons learned, projections, and future plans. Discussions revolved around the areas of crop diversification research, mechanization, the involvement of youth in agriculture, scientific specialization of Hub stations, and the establishment of a Center of Leadership on Cassava in the region. Also discussed were strengthening partnerships, approaches to enhance the regional relevance of research results (Chinyanja Triangle), establishment of research facilities, particularly the Southern Africa Research and Administration Hub (SARAH) Campus in Lusaka, and the proposed Lusophone Research Center in Mozambique, publications, communications, administration, and staff capacity building, among many others.

Additionally, scientists and support staff from the Hub presented highlights of their current work and related these to the attainment of the goal and objectives of the Hub's regional strategy and, on a higher level, of IITA's Refreshed Strategy. They also reviewed and refined their individual workplans until the end of 2014 during one-on-one sessions with the Regional Director.

Staff from the Project Administration Office (PAO), Kayode Awobajo and Emembong Nkana, held a half-day session to update Hub staff and scientists about ongoing initiatives on project administration. They especially focused on and answered queries regarding the roles, responsibilities, services, and areas of concern of the PAO related to the management of existing projects.

To further enrich this year's retreat, the group also underwent a team building exercise which was facilitated by Human Resources Service (HRS) led by Lilian Mendoza, IITA-HR Manager, with Temilade Oke and Helen Adeniji. They conducted fun and meaningful activities that aimed at deepening the sense of cooperation and camaraderie among the participants.

The HRS team also held a town hall meeting with NRS of IITA-Malawi at the Chitedze Research Station, also in Lilongwe. Here, they provided updates and deliberated on issues of staff remuneration, benefits, welfare, and capacity development with the NRS.

Group photo of the Southern Africa Hub team.

Banana virus disease diagnostics capacity of national systems in Africa addressed

To help develop diagnostics capacity of national systems in Africa, a training course titled "*Banana virus diagnostics for clean seed production, safe germplasm exchange, and surveillance of invasive bunchy top disease*" was held on 15 to 24 July at CIRAD Campus International de Baillarguet, Montpellier, France.

The training course was organized by the centre de coopération international pour le développement (CIRAD) with IITA and Bioversity International as part of the research project "Banana bunchy top disease containment and recovery: Building capacity and piloting field recovery approaches through a learning alliance" financed by the CGIAR Research Program on Roots, Tubers and Bananas (RTB).

Viruses pose a major threat to banana cultivation worldwide, particularly the Banana bunchy top virus (BBTV). This virus is now established in 13 countries in sub-Saharan Africa causing devastating production losses. In addition to BBTV, Banana bract mosaic virus (BBrMV) and Banana streak viruses (BSV) also have high economic significance. All these viruses are transmitted through vegetative propagation, including the production of suckers, corms, and tissue culture plants. Distribution of infected plantlets helps promote their large-scale dissemination.

Detection of these viruses is critical to limiting their spread in areas where the viruses are endemic. Thus, diagnostic tools play a crucial role in monitoring viruses in the fields, in the production of virus-free plants, and during international exchange of germplasm. Many countries in sub-Saharan Africa do not have adequate capacity to diagnose banana viruses.

Twenty participants from Burundi, Cameroon, Congo Brazzaville, Democratic Republic of Congo, Gabon, Malawi, Nigeria, and Republic of Benin, attended the course. The training course focused on the application of diagnostics to the production of clean planting materials, disease monitoring, and quarantine monitoring of germplasm to ensure safe germplasm exchanges.

Course organizers Dr Marie-Line Iskra-Caruana, Virologist at CIRAD who hosted the course; and Dr Lava Kumar, IITA virologist, said that participants were trained on the application of simple but advanced techniques to diagnose all known viruses of banana, including differentiation between infectious endogenous BSV and non-infectious ones and helped impart knowledge to participants who can use the skills in their routine research as well as facilitate further training within their own countries.

The organization of this event in Montpellier enabled working with exotic viruses such as BBrMV which is not present in Africa and is an important quarantine threat. Laboratory exercises were organized for participants to assess the learning and also put this to use in the production of virus-free planting material in a session led by Dr Charles Staver of Bioversity International.

Participants visited Vitropic, a banana tissue culture company in Montpellier, which receives technical backstopping for virus indexing from CIRAD, to observe best practices in producing virus-free planting material.

"The course contributed to the advancement of our understanding of diagnostics, interpreting results, and using it for decision making," said Dr Charles Onyeani, Head of the Post-entry Quarantine Station in Nigeria, one of the participants.

Announcement

The IITA Women's Group announces the annual scholarship competition for 2014. Applications are welcome from qualified candidates in the following categories:

- Junior secondary school (US$150)
- Senior secondary school (US$200)
- Polytechnic (US$250)
- University (US$250)

Qualified candidates will be paid in local currency.

Criteria

- Applicants must be children of IITA employees on Pay Grades 1-6.
- Parents of such applicants must have worked at IITA for at least two years and must be presently employed.
- Applicants must be above average academically and must have school reports to prove this.
- Applicants must be registered in schools or must have secured admission into a recognized school.
- Applicants will be expected to perform well during the interviews (both oral and written), which will be conducted for shortlisted candidates.

Forms should be completed and returned to the Employee Service Unit or Station Administrator on or before 10 September 2014. Late or incomplete applications will not be accepted. To get copies of the forms, contact HRS or the Women's Group.

Banana virus diagnostics course participants, CIRAD, Montpellier.