

An IFAD-supported network invested in reaching the full food potential of crops in Africa

14 March 2019, Kampala, Uganda – This is a project borne of a vision shared by the Integrated Breeding Platform (IBP), the Africa Rice Center (AfricaRice) and the International Fund for Agricultural Development (IFAD), that achieving food security can only come from the resolve and engagement of national actors across the crop delivery chain.

They are joined by national agricultural research organizations (NARS), universities, seed businesses and farming communities to work on enhancing breeding processes for climate-resilient crops, bridging gaps so that improved varieties effectively reach farmers' fields. A proof of concept is currently underway in three target countries – Ghana, Senegal and Uganda – with the following five crops: rice, groundnut, common bean, cowpea, and sorghum.

“In my 30+ years career in agriculture, I have witnessed the great work done by scientists to develop and deliver large numbers of new varieties over the years. Yet, the rural poor families in Africa are still not getting the information they need to grow and produce them to satisfy demands, and thus we miss out on realizing their full potential for them to contribute to Africa becoming fully self-sufficient. Meanwhile, the million tons of food imported each year continue to disrupt African economies. A project like this one contributes to the efforts in bridging this information gap, and I strongly believe it is the way we need to go now. It's not just about varietal development, but it is about preparing ourselves to effectively scale them out through expanding our reach across the value chain,” stated Dr Harold Roy-Macauley, Director General of AfricaRice.

The project builds on 4 core components:

- Implementing a knowledge base to connect breeders, extension workers and farmers
- Improving data management and digitalizing breeding, namely through the use of the IBP's Breeding Management System (BMS)
- Upscaling breeding programs to have them test new genetic resources and use molecular markers
- Ensuring some minimal capacity enhancement (human and infrastructure), namely through the integration of PhD and MSc students to the project.

Dr Jean-Marcel Ribaut, IBP Director, explains: “In the end, what we really want is to provide farmers with the tools, germplasm and knowledge they need in order to know **what crop to grow in response to local market demand**. The project is therefore designed around implementing truly demand-led breeding programs, where the needs of farmers (what to grow, when and how) and extensionists (processing and disseminating new products), with the input, and under the coordination, of breeders (who know what is available and possible to deliver) are all considered in a continuum. For this to work, it has to be backed up by a solid network of engaged partners, the adoption of good practices, the deployment and use of the latest technologies in a realistic context and in an appropriate infrastructure, and a good level of capacity and expertise.”

Plans for rolling out of the project components were further solidified during the project's first annual meeting, held from 4 to 8 March 2019 in Kampala, Uganda, with the participation of representatives from national programs, universities, seed businesses and farming communities from Ghana, Senegal and Uganda, as well as of international partner organizations, under the coordination of representatives from the IBP, AfricaRice, and IFAD. PhD and MSc students from the Makerere Regional Center for Crop Improvement (MaRCCI), Uganda, also participated as integrating their work within project activities is at the heart of the project's vision of success.

“I recognize the importance of having NARS involved in project planning and implementation, and even more so, that the project initiatives be aligned with country research priorities and strategies. It will be critical to achieve the project's goals. Indeed, this approach lays a strong foundation to move forward where research initiatives are country-driven, and we are now seeing clear plans as to what each partner in this project will contribute to make it happen. This is very important to all of us, and to me personally, as I believe NARS are key to the transformation

of agriculture in Sub-Saharan Africa. I trust we will be able to rely on each other to bring our project to successful fruition,” concludes Dr Malu Muia Ndavi, IFAD Lead Technical Specialist/AR4D Special Initiatives Manager.

Project Annual Meeting guest list

With the participation of representatives from the IBP, AfricaRice, IFAD, and:

NARS and University partner organizations

- *Centre d'Étude Régional pour l'Amélioration de l'Adaptation à la Sécheresse (CERAAS)*, an ISRA Research Center (*Institut Sénégalais de Recherches Agricoles*), Senegal
- *Centre de Recherches Agricoles de Saint-Louis (CRA St-Louis)* – an ISRA Research Center (*Institut Sénégalais de Recherches Agricoles*), Senegal
- *Centre National de Recherches Agronomiques de Bambey (CNRA Bambey)* – an ISRA Research Center (*Institut Sénégalais de Recherches Agricoles*), Senegal
- Council for Scientific and Industrial Research-Crops Research Institute (CSIR-CRI), Ghana
- Makerere University Regional Center for Crop Improvement (MaRCCI), Uganda
- National Agricultural Research Organization (NARO), Uganda
- National Crops Resources Research Institute (NaCRRI), Uganda
- National Semi-Arid Resources Research Institute (NaSARRI), Uganda

Other partner organizations and collaborators

- Annum Valley Farmers' Association, Uganda
- *Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD)* – Agricultural Research Center for Development
- CGIAR Excellence in Breeding Platform
- Equator Seeds Ltd, Uganda
- International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)
- Namunasa Mixed Farmers Association, Uganda
- National Local Seed Business Association (NULSBA), Uganda
- New Mexico State University
- Pearl seed Company Limited, Uganda
- *Réseau des Organisations Paysannes et Pastorales du Sénégal (RESOPP)* – Groundnut Farmer Organisation, Senegal
- SPARKX SM GH LTD, Ghana
- *Union Producteur de Mbagam* - Rice Farmer Organisation, Senegal
- *Union Producteur de Semences Vallée Fleuve Sénégal* – Seed producers, Senegal
- University of Georgia Feed the Future Peanut Innovation Lab

About the IFAD-funded project to enhance breeding capacity in Africa

This is a three-year (2019-2021) and 2.5M project awarded by IFAD to the Integrated Breeding Platform (IBP) and hosted at the AfricaRice Center, under the title: *Enhancing institutional breeding capacity in Ghana, Senegal and Uganda to develop climate-resilient crops for African smallholder farmers*. The overall goal is to contribute to enhanced food security and poverty alleviation by increasing small-holder productivity and income in the three target countries. It will do so by supporting the development and dissemination of improved crop cultivars that have characteristics that meet farmers' needs and market demands, as well as able to mitigate agro-ecological challenges. Building on several ongoing projects, this initiative brings the resources to cover the last mile of a number of activities, to start new ones, and to implement a network of partners along the crop value chain, all the while supporting a strong capacity building component. Ultimately, it aims to reach 30,000 smallholder farmers (10,000/country) for the adoption of 'fit-for-purpose' varieties, by linking with on-going national agricultural plans led by NARS – an imperative condition of the Science Agenda for Agriculture in Africa (S3A) to secure food security over the next 10 years.

About the project's partners:

Africa Rice Center (AfricaRice)
www.AfricaRice.org

Centre d'Étude Régional pour l'Amélioration de l'Adaptation à la Sécheresse (CERAAS), Senegal
<http://www.ceraas.org/>

Centre de Recherches Agricoles de Saint-Louis (CRA St-Louis) – Research Center, Senegal
<http://www.israsaintlouis.sn/>

Centre National de Recherches Agronomiques de Bambey (CNRA Bambey) – Research Center, Senegal
<http://www.cnrabambey.sn/>

Council for Scientific and Industrial Research-Crops Research Institute (CSIR-CRI), Ghana
<https://www.cropsresearch.org/>

Institut Sénégalais de Recherches Agricoles (ISRA) – Research Center, Senegal
<https://www.isra.sn/>

Integrated Breeding Platform / *Plateforme d'amélioration génétique intégrée (IBP)*
www.integratedbreeding.net

International Fund for Agricultural Development (IFAD)
www.ifad.org

Makerere University Regional Center for Crop Improvement (MaRCCI), Uganda
<https://marcci.org/>

National Agricultural Research Organization (NARO), Uganda
<https://www.naro.go.ug/>

National Crops Resources Research Institute (NaCRRI), Uganda
<http://www.nacrii.go.ug/>

National Semi-Arid Resources Research Institute (NaSARRI), Uganda
<https://www.nasarri.go.ug/>

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