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IFAD cites IITA's efforts to eradicate cassava mosaic disease

Dr Nzola Mahungu (first from left) explains IITA's work on CMD to IFAD's Racha Omar (second from right).

Racha Omar, representative of the International Fund for Agricultural Development (IFAD) in the Democratic Republic of Congo (DRC) and the Republic of Congo, visited IITA-Kinshasa and different community sites in DRC supported by the Institute on 20 August to witness IITA's work in the fight against the devastating cassava mosaic disease (CMD) and the inclusion of the value chain approach to agricultural development.

CMD–the widespread and most severe factor limiting production in sub-Saharan Africa–is caused by cassava mosaic geminiviruses which are transmitted by a whitefly vector, *Bemisia tabaci* (Genn). CMD-affected plants produce few or no sizable roots, depending on the severity of the disease and the age of the plant at the time of infection. Nine countries across East and Central Africa are affected by this pandemic.

Annual losses in storage root yield across sub-Saharan Africa are estimated to be between 15% and 24%, equivalent to 12-23 million tons or US$1.2 to 2.3 billion.

Efforts being adopted by IITA to curb this trend include varietal improvement, multiplication, and distribution of disease-free cuttings. The Institute is providing a system of agriculture, rich in quantity and quality, to provide support to food security and also to sustainable development through the deployment of activities that generate revenue through cassava that can meet the basic needs of primary health care and children's education.

"I see that the close collaboration IITA has with its beneficiaries, the techniques implemented in the fight against CMD, and the adoption of the value chain approach are indeed providing answers. We will reflect internally to see the possibility of developing a project with IITA adopting the same practices in the Republic of Congo." Racha Omar said.

NISER proposes robust collaboration with IITA

Members of the Governing Council and Management of the Nigerian Institute of Social and Economic Research (NISER), Ibadan, on Wednesday proposed a vibrant and robust partnership with IITA.

This was made by Prof Olabisi Oladepo, Chairman of the NISER Governing Council and Prof Olufemi Isaac, Director General, who led the delegates. Prof Oladepo suggested that IITA could benefit from NISER's knowledge and social research bank. "Part of our mandate is to look at current government policies and social and economic areas where development in Nigeria could be fostered. We also pursue policy advocacy issues and hope to use our strong collaboration with the government to project and sell the mandate and work of IITA…we foresee a situation where our mandates will meet," he said.

The NISER participants.

The team was received by IITA's DDGs, Ylva Hibur and Kwame Akuffo-Akoto, and IITA's Regional economist, Dr Djana Mignouna.

Dr Hilbur commended the team for their impressive efforts in promoting knowledge through their monthly seminar series and said that IITA and NISER could work more to promote this.

"We will be happy to explore possibilities of increasing and strengthening our collaboration and interactions with NISER because we cannot achieve great results with our clients, the farmers, without genuine active partnerships," said Dr Mignouna.

The delegates also visited the Business Incubation Platform and IITA's Agripreneurs.

Got a story to share? Please email it with photos and captions to Andrea Gros (a.gros@cgiar.org), Katherine Lopez (k.lopez@cgiar.org), Jeffrey T. Oliver (j.oliver@cgiar.org), Catherine Njuguna (c.njuguna@cgiar.org), or Adaobi Umeokoro (a.umeokoro@cgiar.org).

R4D platform members in DRC, Rwanda, and Burundi meet to prepare for the coming crop season

Between 29 July and 4 August, members of the R4D platforms in DRC, Rwanda, and Burundi action sites organized planning meetings to determine the R4D activities they will implement in the coming crop season.

The key objective of the meetings was to finalize actions and partnership commitments for the implementation of Phase III of the Consortium for Improving Agriculture-based Livelihoods in Central Africa (CIALCA) under Humidtropics. The meetings were attended by members of the platforms as well as representatives of the Humidtropics Coordination Office, IITA, and Bioversity who assisted in moderating the sessions.

Participants discussed and identified best-fit options for integrated systems research addressing productivity, natural resource management, nutrition, market, and institutional issues. A convener was identified for each research theme to coordinate the development of the research protocols. In DRC, the planning meeting was held on 29 July and facilitated by Sylvain Mapatano, the Action Site Facilitator.

The research themes identified and prioritized by the platform were crop-livestock integration; improving access to market for beans, soybean, and cassava; improving banana-based system; enhancing dietary diversity; developing postharvest activities of preferred crops; and improving access to credit. The research themes will be implemented in the Mushinga field site.

In Rwanda, the meeting which was facilitated by Dr Leon Nabahungu, Action Site Facilitator, identified and prioritized the following themes: scaling out nutritious banana and legume varieties, legume-banana-livestock and agroforestry integration, maize-soybean associations, and cassava-legume systems that will be implemented in Kadahenda field site.

The Burundi planning meeting, facilitated by Cyrille Hicintuka, Action Site Facilitator, also identified five themes: cassava-bush beans association, rotation of Irish potato and bush beans, association of maize-soybean in rotation with climbing beans, banana-soybean association, and rice-legume rotation that will be implemented in Gitega field sites. Follow-up meetings at the field sites with the innovation platforms were scheduled for each site.

Dr Marie Yomeni Octavie, IITA Cassava Commodity Specialist (second from left) with members of the platforms planning the activities and subactivities on nutrition.

IITA cited for reviving weed science research … as researchers want action stepped up against weeds

Weed researchers, who met 18-19 August, at IITA, Ibadan, commended IITA Director General Nteranya Sanginga for rejuvenating the weed science program. They also called for more concerted efforts to tackle the weed menace in Africa.

During the inception meeting, the researchers, who are members of the Steering Committee of the IITA Cassava Weed Management project, were unanimous in saying that Africa would not be able to maximize the gains from crop improvement unless the problem of weed infestation on farmers' fields was addressed.

The researchers support the new investment and research attention on weed science—a very important but often neglected component of agronomy, and lauded IITA for supporting partners in tackling the problem.

"We thank IITA for the equipment given to us under the project to help to find solutions to the problems of weeds," said Dr J.C. Okonkwo, Executive Director, National Root Crops Research Institute (NRCRI), Umudike.

Under the new research focus, IITA committed to revive its weed management research; rehabilitated an office building, procured equipment, and hired staff. The building was commissioned during the Steering Committee Meeting by Deputy Director General (Partnerships & Capacity Development), Dr Kenton Dashiell, who dedicated it to resource-poor farmers, especially women and children.

Prof Ayoade, Deputy Vice Chancellor (VC), University of Agriculture Makurdi (UAM), who represented the VC, urged the IITA Cassava Weed Management project to specifically include graduate students to help develop the critical human capital that would take forward research on weed science.

Dr Alfred Dixon, Project Leader, Cassava Weed Management, reiterated the project's goal of increasing productivity for at least

Dr Dashiell conmissions the Weed Science Center, IITA, Ibadan.

125,000 Nigerian farm families through the provision of labor-saving solutions for weeding which is usually done by women and children. He said that the project was currently testing 21 different pre-emergence and 19 post-emergence herbicides at different treatment rates to discover the best combinations for sustainable control.

The Project Leader expressed regret over farmers' continued use of obsolete herbicides despite their adverse effects on the environment and health. He said the project intended to change the situation by offering farmers evidence-based information that would help them to make better choices.

Dr Dixon also spoke on the ongoing agronomy trials on weed control by IITA and its partners across the different agroecological zones in Nigeria. These trials seek to control weeds by combining improved cassava varieties with proper planting dates, plant populations, and options for plant nutrition. The agronomy trials are also focusing on intercropping and tillage research.

Members of the Steering Committee were pleased by the progress report. Consequently, they suggested new areas that the project could explore for better performance and also developed a monitoring and evaluation guide for the project.

The Steering Committee comprises experts from the three collaborating institutions—NRCRI, UAM, and Federal University of Agriculture Abeokuta. Other partners are drawn from Agricultural Development Programs across the States in Nigeria, international cassava scientists, the donor community, government representatives, and the private sector;

The Committee also visited the IITA Business Incubation Platform and the experimental plots in Moniya, Ibadan, and Ile-ogbo in Osun State.

AgResults holds Innovation Platform workshop on adoption of aflatoxin-reduced maize

The AgResults Aflasafe team organized a workshop at Ibis Hotel in Lagos on 26 August for actors in the maize value chain to enlighten them about the destructive effects of aflatoxin and its dire health hazards on humans who consume contaminated grains. The workshop also addressed various issues and common challenges in engendering a sustainable market for aflatoxin-reduced maize and its adoption.

Instituted with the objective of ensuring aflatoxin-free maize grain, the AgResults project demonstrates a pull mechanism model for significantly reducing contamination. The project works with smallholder maize farmer and maize-producing organizations and cooperatives as implementing partners in ensuring that they are aware of the hazardous effects of aflatoxin and also raising their willingness to invest in control measures and link farmers with markets for premium prices.

To facilitate the innovation platform meeting, Debo Akande, Manager, AgResult Aflasafe Pilot Project, presented a paper titled *Increasing production and quality of maize through AgResults Aflasafe Project*. Dr Joseph Atehnkeng, Plant Pathologist, IITA, Ibadan, also presented a paper on Basics of aflatoxin, its impact on health and business, while Dr Dotun Oladele of Animal Care, Nigeria, spoke on *Status and challenges of poultry production in Nigeria*. This was followed by an open forum that enabled the aflasafe™ farmers to interact with the private companies which shared available business opportunities.

Akande, in his remarks, said that an estimated 25% of maize in Nigeria had unacceptably high levels of aflatoxin. IITA and partners developed aflasafe™, a biocontrol product, to reduce contamination by 80 to 90%. The outcome last year showed a reduction of aflatoxin in cultivated maize below the European standard," he added.

Atehnkeng said aflatoxin was prevalent in food and feed in West African countries and human exposure to the toxin was quite high because of the weather condition in the subtropics, inadequate grain handling structures, and cultural practices. "The exposure has deleterious effects on man and animals, causing stunting and kwashiorkor in children, suppression of immunity, implicated in liver cancer among others, and even death in the case of high level exposure."

He added that aflatoxin results in trade losses in millions of dollars annually which ultimately affect the economies of the smallholder farmers and the country in general.

Alhaji Nuhu Lawal Umar, a farmer and implementer from Kaduna State, praised AgResult and IITA for the workshop. " It's been very interesting; the workshop gave me the opportunity to meet and interact with many buyers willing to buy from me. I deal mainly in aflasafe-reduced maize. We have been using aflasafe-reduced maize for my private and commercial farming for the past five years. We want to go into contract farming with good companies," he said. "This is because this technology helps eradicate poverty, taking subsistence farming to a commercial level. For us in the north it helps to improve social status and provides employment."

Daniel Ogoke, a Processor of Grow Rich Resort Limited, Benue State, said "The workshop has pointed me in the right direction in finding a source of good quality maize." He added that "We are now sure that aflasafe-treated maize will improve the quality of our products."

The workshop was attended by 10 implementers who are currently working with farmers in six States across Nigeria from cooperatives and farmer-based organizations and 30 private companies who are interested in aflatoxin-reduced maize.

The AgResult-aflasafe project is sponsored by Australia/AUSAID, Bill & Melinda Gates Foundation, Canada/ Finance Canada, United Kingdom/DFID, United States/USAID through Deloitte Consulting LLC on behalf of the World Bank.

Debo Akande (left) addressing participants during the workshop.