

Researchers and partners discuss value addition in cassava through cassava-based feeds

More than 50 experts on cassava, nutrition and livestock, the private sector—represented by producers and feed millers—and representatives from donor groups, the Nigerian Federal Ministry of Agricultural and Rural Development, and development partners, came together in IITA this week to discuss how cassava residues or by-products such as cassava peels can be used in industry and to add value to the industrial cassava value chain.

The meeting, held at IITA 28-30 October, aimed to come up with a roadmap for developing a cassava-based feed system for livestock, an action plan for Nigeria, and pilot projects that would serve as models in Africa.

The meeting was organized by IITA, GCP21, the Nigerian Federal Ministry of Agriculture and Rural Development, the CGIAR Research Programs on Roots, Tubers and Bananas, Livestock and Fish, and Humidtropics, International Livestock Research Institute (ILRI), and the private livestock feed sector.

As part of Nigeria's Agricultural Transformation Program, the cassava transformation plan seeks to create a new generation of cassava farmers, producers, and processors oriented towards commercial production to generate cassava for specific value-added chains. The plan aims to turn the cassava sector in Nigeria into a major player in the local and international production and processing arena for flour, starch, sweeteners, ethanol and dried chips markets through private sector-led value-added chains.

Traditionally small farmers discard the peels that are left as waste near processing locations for feeding their animals (poultry, goats and pigs). Few attempts have been made to establish a nutritionally and economically sustainable cassava-based feed system using local products to replace imported products in the feed industry.

Enhanced production under the Cassava Transformation Plan will produce over 2 million tonnes of additional cassava by-products each year, offering a unique opportunity to support a cassava-based feed system at an industrial scale.

The use of cassava-based feeds in Nigeria will bring several benefits including cutting down on maize imports, most of which are used as feeds for livestock, according to the researchers.

"Africa imported maize worth US\$4.63 billion in 2011 of which Nigeria's feed



Participants in the workshop.

industry alone accounted for 1.2 million tons worth about \$350 million," says Dr Iheanacho Okike, Country Representative for ILRI based in Ibadan.

"If we use cassava peels for livestock feeds, for instance, we will be able to reduce the amount we spend on maize importation, and more importantly reduce the competition between man and livestock for maize," he added.

Efforts to transform Nigeria's agriculture have raised the production of cassava to more than 50 million tons per annum, with several factories now processing cassava to products such as flour, gari, glucose, and ethanol. This growing demand and processing of cassava is also churning out cassava residues including cassava peels to the environment.



Dr Claude Fauquet, Director of GCP 21, during the opening program.

Dr Peter Kulakow, IITA Cassava Breeder, said the "use of cassava peels in livestock is a win-win situation for both agriculture and the environment. It is basically converting waste to wealth," he added.

Dr Claude Fauquet, Director of GCP 21, said the use of cassava-based feeds would widen the opportunities for cassava farmers and help alleviate poverty.

According to him, Africa, being the lead producer, needs to take advantage of the crop, by creating/tapping into value addition.

Fauquet also said Nigeria produces 50% of the world's cassava although poverty levels in the country remained high when compared with Latin America and Asia.

The Minister of Agriculture and Rural Development, Dr Akinwumi Adesina praised IITA for its continuing work on cassava and for hosting the conference.

He said the government had concluded arrangements to establish additional ethanol and starch processing industries in three cities across the country to create more value addition for cassava.

Represented by Dr Martin Fregene, Senior Technical Advisor, the minister said on completion, the factories would be producing cassava residues which if converted to feeds would create additional jobs and incomes for the country.

According to him, the nation's agricultural transformation plan aims to create about 3.5 million jobs through the establishment of agro-based industries by 2015.

IITA holds bioinformatics training for researchers

Bioinformatics is a technology that manages and interprets the massive data generated by genomic research. It is a field where most researchers have the least expertise. To build the capacity of researchers in Tanzania, IITA, Inqaba Biotech, and CLC-Bio organized a two-day bioinformatics training in Dar es Salaam on 17-18 October at the hub.

The workshop aimed to give participants a better understanding, through theory and hands-on practice, on common sequence analysis techniques in basic and advanced DNA sequence analyses.

The training brought together 20 researchers not only from IITA but also different institutions in Tanzania including Ifakara Health Institute-Bagamoyo Research Centre, Muhimbili University of Health and Alliance Sciences (MUHAS), Sokoine University of Agriculture (SUA), Government Chemist Laboratory Agency, Tsetse and Trypanosomiasis Research Institute, Mikocheni Agricultural Research Institute (MARI), and Tanzania Wildlife Research Institute (TAWIRI).



Workshop participants and resource persons, Science Building, IITA-Tanzania.

The training was conducted by Anne Arens, Field Application Scientist with CLC Bio, with technical support from Reinhard Eckloff Ressler, Mentor for Europe, Middle East, and Africa. Also present were Oliver Preisig, Executive Director, Inqaba Biotech, South Africa, and Fumbuka Adriany, Inqaba Biotech Sales area Manager for Tanzania and IITA's virologist James Legg who was also one of the organizers.

At the end of the training, James Legg, on behalf of the participants and as the acting officer in charge of the hub, thanked Inqaba Biotech and CLC Bio team for offering such a useful training to Tanzanian scientists.

He noted that bioinformatics was an important field and that researchers lacked the capacity to handle the massive data generated by research.

Anne Arens commended the participants for their active participation during the workshop and encouraged them to do more tutorials to be familiar with the software.

Dr Sanginga praises supporter of IITA projects

IITA DG Sanginga praised Prem Warrior, former Senior Program Officer with the Gates Foundation, for his unwavering support to African smallholder farmers.

At a dinner attended by key management staff of IITA, Dr Sanginga said Mr Warrior was instrumental to the success of several projects in Africa, including N2Africa—Putting nitrogen fixation to work for smallholder farmers in Africa.

Dr Sanginga and Mr Warrior first met in Nairobi. At that time, Dr Sanginga was the director of CIAT-TSBF based in Nairobi, and coincidentally CIAT-TSBF projects were being transferred to Mr Warrior who had just joined the foundation.

"When I got a call that a Mr Warrior would be visiting our team in Nairobi, I was apprehensive, especially looking at his name, and I asked myself and shared with colleagues: Who is this Mr Warrior? I hope he is not coming for war?" Dr Sanginga recalled.

The DG said that his anxieties fizzled out with the arrival of Mr Warrior—a soft spoken but firm officer who is given to details.

"In my interactions with Mr Warrior, I have found him to be a friend who is committed to bringing development to Africa's poor," he added.

Earlier, Dr Kenton Dashiell, Deputy Director General for Partnerships & Capacity Development thanked Mr Warrior for his efforts towards a food secure Africa.

In his response steeped in a deep sense of humility, Mr Warrior said he was simply discharging his duties and responsibilities.



DG Sanginga introduces Prem Warrior, formerly of Bill & Melinda Gates Foundation.

"I saw a huge potential in IITA and other partner organizations, and supporting them was the right thing to do," he said.

Apart from N2Africa, other projects which have received support from Mr Warrior's portfolio included, COMPRO and the aflatoxin control project that has received global recognition with the World Food Prize Field Award given to Dr Charity Mutegi of IITA-Kenya recently. These projects are impacting on the livelihoods of farmers, improving incomes and providing safer foods.

Help conserve electricity!

Before leaving your workplace at the end of the day, make sure that you have:

1. Powered off all unnecessary electrical office/lab equipment;
2. Turned off air conditioners; and
3. Switched off all lights.

What's happening this month?

We are now at that time of year again: Open Day is just around the corner, and R4D Week and the Board Meeting are almost here! What's in store for us this year?

The **IITA Open Day** will be held on Saturday, 16 November. This promises to be another exciting event for staff (and their families) based in Ibadan, Nigeria. About 5,000 staff and family members are expected to participate in this event, which features long-service awards, recognition of retirees, tree planting as part of the Reforest IITA project, talent presentations by staff, cultural numbers, open house, exhibitions and displays, video showing, fun events for children, lunch, and raffle.



R4D Week will be on 25-29 November. We are expecting more than 100 scientists and staff to converge in Ibadan for this annual planning and review meeting. This year's theme is "It is IITA's time." The program includes presentations on current programs and projects, discussions on new initiatives, workshops on specific research themes and CGIAR Research Programs, poster presentations, meetings, and social and fun events.

Watch out for the final program and further announcements about the activity from the local organizing committee.

Other activities that are ongoing and planned for this month are:

- Sports fest, part 2, ongoing
- Board Meeting, 25-29 November
- NRS and IRS Performance Appraisal, deadline: 30 November

Welcome

Welcome to new staff!

Dr Francesca Nelson has joined IITA-Tanzania as the Senior Food Security Specialist. Dr Nelson is from the United States. She obtained her PhD in Agricultural and Nutrition Economics from Oxford University, England (1996), Masters of Public Health (1979), and her BSc in Behavioral Science and Health Education (1978) from the University of California, in Los Angeles.

Prior to her appointment, she was the Senior Agriculture, Food Security and Nutrition Advisor at USAID



East Africa for regional Feed the Future programs. Over her 30-year career with the United States Agency for International Development, Dr Nelson also served 10 years in Africa, worked as Team Leader for Monitoring & Evaluation and Communication & Outreach in Afghanistan, Deputy Director for Health, Agriculture & Economic Growth in Angola, and as an agriculture, health and nutrition adviser in South & Central America, Jamaica, Egypt, and Washington D.C. She is accompanied by her children, Daniel and Ursula. Her e-mail address is f.nelson@cgiar.org.

Dr Ibrahim Dugje has joined IITA-Ghana as the SARD-SC Regional Systems Agronomist. Dr Dugje is a Nigerian. He obtained his PhD (2001) and his MSc in Crop Science (1992) from

the University of Maiduguri, Nigeria, and his BSc in Agriculture (Crop Production and Protection) from Ahmadu Bello University, Zaria, Nigeria (1985).

Prior to his appointment, he was the National Coordinator WECARD/CORAF Maize Project and a member of the Borno State Agriculture Transformation Team. He was a Principal Investigator for Drought Tolerant Maize for Africa (DTMA) and Provitamin A Maize Projects, and a member of the University of Maiduguri Research Proposal Writing Workshop Committee (2010 to 2013).

He is accompanied by his wife, Zura Ibrahim and children. His e-mail address is i.dugje@cgiar.org.

Dr Veronica Uzokwe has joined IITA-Tanzania as the SARD-SC Cassava Agronomist (Field Fellow). Dr Uzokwe is a Nigerian. She obtained her PhD in Plant Genetics/Plant Breeding (2008), MSc in Plant Breeding/Agronomy (1998) and BSc in Botany/Physiology (1995) from the University of Ibadan, Nigeria, and postdoctoral degree in Crop Science from the Chinese Academy of Agricultural Sciences, Beijing, China (2011).



Prior to her appointment, she was a Volunteer/Consultant Technical Assistant on Agriculture at the Nigerian High Commission in Tanzania (2012). She was a Plant Breeder/Consultant at the International Rice Research Institute (IRRI) in Mozambique/Tanzania (2011-2012). She also served as a Visiting Research Fellow at IRRI in Philippines (2011). Her e-mail address is v.uzokwe@cgiar.org.

Dr Nhamo Nhamo, a Zimbabwean, has assumed duty in IITA-Zambia as SARD-SC Cassava Agronomist (Field Fellow). Dr Nhamo was formerly an Agronomist (Consultant) at IRRI in Dar es Salaam, Tanzania. He worked as a Postdoctoral Fellow – Soil



Fertility Agronomist at Africa Rice Center (2009-2011). Just before joining IITA, Dr Nhamo served as a Senior Lecturer at Chinhoyi University of Technology in Zimbabwe.

He obtained a PhD in Agricultural Sciences from the University of Bonn, Germany (2007), Master in Soil Fertility (2003) and BSc Agriculture Honours in Soil Science from the University of Zimbabwe (1996).

Dr Nhamo has two children named Simbarashe and Makanaka. His e-mail address is n.nhamo@cgiar.org.