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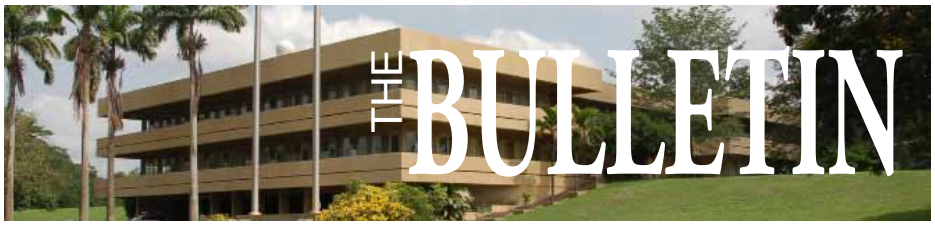

Nigeria releases more cassava with higher pro-vitamin A to fight micronutrient deficiency

Hernan Ceballos (left) CIAT Plant breeder with IITA Cassava breeders Peter Kulakow (middle) and Elizabeth Parkes (right), harvesting the new cassava varieties in Ibadan

Three newly improved vitamin A cassava varieties with yellow roots have been released by the Nigerian government, stepping up efforts to tackle the problem of vitamin A deficiency especially among women and children in the country. These new varieties were developed jointly by IITA and the National Root Crops Research Institute (NRCRI) Umudike.

The three varieties—UMUCASS 44, UMUCASS 45, and UMUCASS 46—are the second in the series of pro-vitamin A varieties released in the country, and are commonly known as NR07/0220, IITA-TMS-IBA070593, and IITA-TMS-IBA070539.

The new varieties have a pro-vitamin A content that averages 10 parts per million (ppm) based on fresh roots as compared to the first series (UMUCASS 36, UMUCASS 37, and UMUCASS 38 commonly known as IITA-TMS-IBA011368, IITA-TMS-IBA1371 and IITA-TMS-IBA011412) that were released three years ago with a pro-vitamin A content of between 6-8 ppm.

Dr Peter Kulakow, IITA Cassava Breeder, said that the development of the varieties demonstrates strong collaboration between scientists at NRCRI and IITA which benefits Nigerian farmers and especially women and children who suffer from vitamin A deficiency.

Afflicting almost 20% of pregnant women and about 30% of children under the age of five, vitamin A deficiency results in stunting in children, predisposes them to sicknesses such as diarrhea and measles, and even premature death. In pregnant women, vitamin A deficiency results in night blindness and increases the risk of mortality. Measures to address this deficiency include dietary diversity, fortification, supplementation, and now biofortification.

In 2011, researchers from IITA and NRCRI with funds from HarvestPlus developed the first series of biofortified pro-vitamin A cassava varieties to help reduce the incidence of vitamin A deficiency especially in the rural communities.

Dr Chiedozie Egesi, NRCRI Cassava Breeder, said this newer set of pro-vitamin A cassava varieties will play a role in attaining the goals of the Cassava Transformation Agenda of the Federal Government of Nigeria and help improve cassava food products such as gari, fufu, high quality cassava flour, cassava bread, and starch.

"This new set of pro-vitamin A cassava varieties have increased beta-carotene levels as well as matching agronomic characteristics as an incentive for better farmer adoption," he added.

Prior to their release, participatory varietal trials involving farmers were conducted across 10 states in Nigeria, the world's top cassava producer, cutting across the different agroecological zones. The varieties have potential yields of 32–36 tons per hectare; they branch either moderately or profusely and possess yellow roots. Farmers love the varieties, helping to increase the acceptance of "yellow cassava", thanks to HarvestPlus; researchers forecast a high adoption rate for the varieties.

The next steps include the rapid production of breeders' and foundation seed stock so that commercial farmers will have access to these new varieties. This process involves advocacy and education on the processing, marketing, and storage of products from these varieties to derive the maximum benefits from these varieties.

CGIAR plant breeders are not resting. Hernan Ceballos, cassava breeder from CIAT in Colombia has developed biofortified germplasm that IITA breeders are actively using in crosses to select for even higher beta-carotene germplasm.

The development of these varieties is funded by HarvestPlus. Other partners include the International Center for Tropical Agriculture (CIAT), the Brazilian Agricultural Research Corporation (Embrapa), and various Nigerian government agencies.

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), Godwin Atser (g.atser@cgiar.org), Catherine Njuguna (c.njuguna@cgiar.org), or Adaobi Umeokoro (a.umeokoro@cgiar.org)

Ibadan experiences the heaviest June rainfall in 62 years

Sustainable flood monitoring systems around the campus lakeside to be developed by IITA

Heavy rainfall during the last month has caused the IITA lake to overflow which affected parts of the Africa Rice farm installations and the roads around the lake. The situation is not yet worrying as cleaning the dam outlets from tree branches, mud, and dirt was sufficient to reduce the water level in the lake surroundings quickly. Nevertheless, IITA is looking for long-term solutions to manage heavy rains and the potential risks of floods.

"We should brainstorm mitigating factors and design solutions to save our institute from future risks," said DG Sanginga in a meeting with IITA managers. An international consultant will be hired to address long-term risk management that will be implemented via an interdisciplinary steering group. We will also closely work together with neighboring communities and the local government," confirmed the DDG for Corporate Services Kwame Akuffo-Akoto in an interview with the Federal Radio Corporation of Nigeria.

June 2014 rainfall at Ibadan

Analysis of the rainfall recorded in June between 1952 and 2014 shows that the rainfall this June was the heaviest (367 mm) recorded in 62 years. This monthly figure almost doubled the mean June monthly rainfall of 188 mm at Ibadan. Weekly analysis revealed that the last week of June this year also experienced the heaviest rainfall (240.8 mm) among the last weeks of June in 62 years. This ranked second among all other weeks of the year, surpassed only by the third week of June in 2001. The series of rain events in the last week of June started with 50 mm on 23rd followed by 84.5 mm on the 24th , by 33 mm on the 26th, and by 85 mm on the 28 th. Though the maximum daily rainfall (85 mm) within this week was not among the highest, the intensity of daily occurrence was the highest and this is responsible for the flooding. The probability that weekly rainfall in June would exceed 200 mm causing flooding is only 2 out of 62. The probability that any week of the year would experience an excess rainfall above 200 mm is only 5 in 62.

By Geospatial Laboratory IITA, 2014

IITA campus beginning and end of the week

Nursery road

IITA Lake

AfricaRice field and nursery

Repositioning the Threshing Building for scientific excellence

The new Threshing building

The renovation of IITA's Threshing Building not only adds beauty to the campus but will also contribute more to scientific excellence, as the Institute aims to lift 11 million people out of poverty and reclaim 7.5 million hectares of degraded land into sustainable use.

Located opposite the Genetic Resources Center, the Threshing Building or Building 201 as is popularly called, is among the oldest on the Ibadan campus. Before its conversion to a scientific workshop, it was an open auditorium; its historical significance lies in its having served as the venue for the commissioning of IITA-Ibadan in 1967. In the last decade, the Threshing Building degenerated, partly from age but, more importantly, as a result of poor maintenance.

Bamiyo Anjorin, Research Supervisor with Maize Program, said, "This Building was neglected despite its significance to IITA's research and to Africa until the arrival of the new management team under Dr Nteranya Sanginga."

"I remember I told him (Dr Sanginga) that if he wanted to be my friend, he should renovate the Threshing Building. He did it, and I am so glad," he added.

The facility serves as the major center for seed processing for IITA. It is from the Threshing Building that all the improved seeds/varieties are sorted, packaged, and distributed to IITA's partners including national partners across the world.

"The Threshing Building is actually the 'heart of IITA.' For instance, it there is any contamination of seeds here, it would affect IITA's reputation and food security in Africa," Anjorin explained. Besides the new look, the transformation has also boosted the morale of staff. Mr Alake Isaac, Fieldworker 11, said the facelift of the facility made the working environment better.

"Before, the dust alone could send one to the clinic. But now we have fans, better tables, and better toilet facilities. I am proud working in this Unit now," Mr Isaac said. For Charity Salami, another worker, the work environment now gives a better opportunity for concentration and efficiency. "Things are better organized now," she said.

To ensure the sustainability of the reforms in the Building, the staff who work there have constituted a committee to ensure its good use and maintenance.

The committee which was inaugurated by DG Sanginga is comprised of Williams Oluseyi (Chairperson), Talabi Abidemi O. (Secretary), Ushie Margaret (Asst. Secretary), Anthony O. Job, Layi Adeniyi, Boniface Ibanga, Shittu Afeez and Uthman Rukayat. Mrs Williams who heads the committee could not hide her joy as she said, "I am happy. The Threshing Building is now superb."

This success story would be incomplete without acknowledging the contributions of Oyinlola Sylvia, Oloyede Gbenga, as well as of the building supervisors.

IITA's scientist among top 40 under 40 women in Kenya

Charity Mutegi's flag continues to fly high as she joins this year's list of the top 40 Kenyan women under 40 in the science category. Charity made the Institute proud last year by receiving the 2013 "Norman Borlaug Award for Field Research and Application". She is the Country Coordinator for IITA's Aflasafe Project in Kenya.

She was again recognized for her efforts in controlling aflatoxin, a naturally occurring mold that is found in key staple crops such as maize and groundnut. It is a well-known carcinogenic substance and highly toxic to people and livestock.

Charity is spearheading efforts to identify and introduce a biocontrol product in Kenya that can be used to significantly reduce aflatoxin levels in maize.

Congratulating Charity, Ken Dashiell, IITA's Partnership and Capacity Building Director, said the nomination was well deserved due to her hard work and dedication.

"Congratulations! The recognitions you are receiving are well deserved and they also help to promote IITA and Aflasafe. Thank you for your dedication in helping to improve the health of Kenyans and people all over Africa."

Victor Manyong, IITA's Director for Eastern Africa, also congratulated her for her nomination.

The list of the top 40 under 40 in women in Kenya, now in its sixth year, is drawn up annually. It recognizes women who have made a tremendous impact in their various categories. Every year, Business Daily, a leading regional business newspaper, invites its readers to nominate Kenyan women under the age of 40 who have made significant achievements in various segments of society and the economy. A panel of judges is then convened to sift through the entries and pick out the outstanding nominees for recognition.

Dr Mutegi being cheered

Welcome

Dr Abdelaziz Abdelgadir, US citizen, has joined IITA-Kano, Nigeria, as COMPRO II Soil Microbiologist. He obtained a BSc in Agriculture (Soil Science) from Khartoum University, Sudan, and an MSc in Soil Science from Cornell University, Ithaca, New York, in 1994. He earned his PhD in Soil Science from the same university in 1998 and majored in Soil Science with minors in Plant Physiology and International Agriculture.

He was a Soil Scientist at the Fertilizer Technology Section, SABIC Research and Technology, Riyadh, Kingdom of Saudi Arabia (KSA) from 1999 to 2008. Since 2008, he has been working as a Research Fellow in the Biosystems Engineering Department, Auburn University, Alabama, USA. He can be reached on his official e-mail A.Abdelgadir@cgiar.org or tel: +234 8060522204

Dr Wende Mengesha, an Ethiopian, has joined IITA-Ibadan, Nigeria, as a Visiting Scientist – Maize. He earned a BSc degree in Agriculture, Plant Science from Alemaya University of Agriculture in 1996, an MSc degree in Plant Breeding / Agriculture from the University of Free State, South Africa in 2003, and a PhD in Plant Breeding from the University of KwaZulu Natal in South Africa in 2014.

Prior to this appointment, Dr Mengesha was a maize breeder and breeding / genetics division head at the Ethiopian Institute of Agriculture Research, Bako National Maize Research project from 1997 to 2009. He was also a junior researcher at the Oromia Research Institute from 1996 to 1997.

He resides temporarily at the dormitory of the International House on IITA campus. His office is in building 400 and his e-mail address is W.Mengesha@cgiar.org

Nouhoun Belko has joined the IITA-team in Kano, Nigeria, as Postdoctoral Fellow Cowpea Agronomy / Physiology, where he will be working on the phenotyping for drought and low-P tolerance in cowpea. Nouhoun is an alumnus of the University of Ouagadougou, Burkina Faso, where he obtained a PhD in Crop Physiology 2013). He completed his MSc in Plant Biology (2006) at the University Cheikh Anta Diop of Dakar, Senegal, and BSc degree in Applied Biology 2004) at the University of Ouagadougou, Burkina Faso. He worked as a Visiting Scientist at North Carolina University (NCSU), Raleigh, USA from August to October 2013. He was a Research Fellow at CERAAS in Thies, Senegal, from January to July 2013 and at ICRISAT, India from July to December 2012.

Among the various international awards and scholarships to his credit are: recipient of the Japan International Award for Young Agricultural Researchers 2013 by JIRCAS, AFFRC-MAFF, in Tokyo, Japan; First Prize, Best Young Scientist 2012 during the 3rd West and Central Africa Agricultural Science Week of CORAF/WECARD in N'djamena, Chad; Sir CV Raman International Fellowship for African Researchers Grant 2012 by the Department of Science and Technology, India; and First Prize of the Graduate Student Research Paper Competition 2011 in PhD Category by The Essential Electronic Agricultural Library (TEEAL), Cornell University, Ithaca, NY-USA; in recognition of being a highly promising young scientist and for his outstanding scientific achievements. Nouhoun Belko is a national of Burkina Faso and can be contacted on N.Belko@cgiar.org

Theresa Ampadu-Boakye, from Ghanaian, has joined IITA-Nairobi, Kenya, as N2Africa Monitoring and Evaluation Specialist. She holds an MSc degree in Development Planning and Management, a joint postgraduate program between the University of Dortmund and Kwame Nkrumah University of Science and Technology, Kumasi-Ghana.

Prior to this appointment, she was the Regional Monitoring and Evaluation Specialist for 2SCALE Project of the International Fertilizer Development Center (IFDC) and Technical Advisor/ Senior Technical Advisor (2005-2012) with the German Development Cooperation (GIZ)-funded Market Oriented Agriculture Programme (MOAP) which was implemented in Ghana in partnership with the Ministry of Food and Agriculture (MOFA). She designed and implemented monitoring and evaluation systems for both the GIZ-funded MOAP project and 2SCALE.

Her e-mail address is T.Ampadu-Boakye@cgiar.org. Her office address is c/o *icipe*, Kasarani, P.O. Box 30772-00100, Nairobi, Kenya, and telephone number +254-702-025723.

Murat Sartas, a Turkish national, has joined IITA as a Visiting Scientist – Innovation Systems Scientist. He holds a BSc Certificate in Economics from the Middle East Technical University, Turkey, 2005. He also obtained MSc degrees from 2010 to 2013 from different universities in disciplines ranging from Economics, Agriculture, Food and Resource Economics, and Food and Environmental Policy Analysis to Rural Development and Natural Resource Management.

Murat was a researcher at the Swedish University of Agricultural Sciences and worked with the Center for International Forestry Research (CIFOR) and International Food Policy Research Institute (IFPRI) on the Agriculture for Nutrition and Health (A4NH) program in 2013. In 2006, he was an Instructor at the Department of Economics Middle East Technical University, Turkey. He could be contacted on his official e-mail M.Sartas@cgiar.org.