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THE BULLETIN

N2Africa project receives prestigious World Bank award

Harvesting Nutrition Celebration: A Showcase of Award-Winning Agriculture-Nutrition, a ceremony to celebrate the three projects that scooped the 2013 Human Nutrition Award, took place 19 February, at the World Bank Headquarters in Washington D.C. The projects were selected for bridging the gaps among nutrition, agriculture, and food security.

The N2Africa project was recognized for its effort in scaling out technologies that promote better nutrition through promoting legume production among smallholder farmers in sub-Saharan Africa. This was in the most scalable approach category. Theresa Ampadu-Boakye, from IITA-Nairobi, the project's Monitoring and Evaluation Expert, and Ilse de Jager, N2Africa PhD student at Wageningen University, received the award on behalf of the project team.

N2Africa stood out as a large-scale multi-country project, working with many partners and therefore able to reach many smallholder farmers, and its efforts to enhance agricultural productivity through the cultivation of legumes which potentially improve the nutritional security of the household, directly and/or indirectly.

The Harvesting Nutrition Contest, sponsored by the World Bank, aimed at rewarding agricultural projects around the world that have bridged the gaps among nutrition, agriculture, and food security. It was organized by the Secure Nutrition Knowledge Platform in partnership with the Global Alliance for Improved Nutrition (GAIN) and Save the Children.

N2Africa is a large-scale project focused on putting nitrogen fixation to work for smallholder farmers growing legume crops in Africa. Funded by the Bill & Melinda Gates Foundation, the project is now in its second phase which began on 1 January 2014.

The five-year initiative is led by Wageningen University together with IITA, the International Livestock Research Institute (ILRI) and the Alliance for a Green Revolution in Africa (AGRA), among other partners. It also brings together a range of partners from the following countries where it operates: DR Congo, Ethiopia, Ghana, Malawi, Mozambique, Kenya Nigeria, Rwanda, Tanzania, Uganda, and Zimbabwe.

The 2013 Harvesting Nutrition contest attracted 50 submissions from projects around the world seeking to improve the impact of agriculture and/or food security interventions on nutritional outcomes.

An N2Africa farmers' field day in Tanzania showcases modern legume-growing technologies.

Events

External Midterm Review of Africa RISING East/Southern Africa Project, 22 February to 16 March, Tanzania and Malawi

Annual Progress Review and Work Planning Meeting, 25-27 February, Golden Tulip Hotel, Kumasi, Ghana

Africa RISING Mali Progress Report/Work Plan Review Meeting, 26 and 27 February, Mali

Eastern Africa Africa RISING Innovation Platform Workshop, 27 February, Dodoma, Tanzania

International Conference on Integrated Systems Research for Sustainable Intensification in Smallholder Agriculture, 3-6 March, IITA Conference Center, Ibadan, Nigeria (http://humidtropics.cgiar.org/events/humidtropics-2014-science-conference/)

International workshop on BBTV Learning Alliance, 9-13 March, IITA Conference Center, Ibadan, Nigeria

Regional/Station Administrators Meeting, 16-17 March, Vigna Room, IITA-Ibadan, Nigeria

18th International Association of Research Scholars and Fellows (IARSAF) Annual Symposium, 23-24 March, IITA Conference Center, Ibadan, Nigeria

N2Africa-Nigeria 2015 Annual Planning Meeting, 24-25 March, Hotel De Bently Utako District, Abuja, Nigeria

Annual Review and Planning Meeting of the Africa RISING West Africa Project, 24 and 25 March, Mensvic Hotel, East Legon, Accra, Ghana

Women Empowerment Platform, 25 March, Vigna Room, IITA-Ibadan, Nigeria

Genetic linkage map of cassava published in G3

A high-resolution linkage map and chromosome scale-genome assembly for cassava created by a group of international researchers, including some from IITA, has been published in G3 Genes Genomes Genetics and highlighted by the Genetics Society of America (http://www.g3journal.org/content/5/1/133.full).

The linkage map was generated by combining 10 genetic maps from 14 diverse parents from African cassava breeding projects including those of IITA in East Africa and Nigeria. It was a collaborative effort among IITA, the Agricultural Research Institute (ARI) of Tanzania, National Crops Resources Research Institute (NaCRRI) in Uganda, National Root Crops Research Institute (NRCRI) in Nigeria, and the University of Berkeley/ Joint Genome Institute, USA.

It was accomplished through two collaborative projects funded by the Bill & Melinda Gates Foundation, one

Cassava

administered by IITA which focuses on the development of mapping populations, and the other by the University of Arizona that focuses on improving the cassava genome sequence.

According to Dr Morag Ferguson, IITA's Cassava Molecular Geneticist, the maps have allowed the aligning of DNA sequence fragments into larger fragments or scaffolds, so that now 90% of the cassava genome assembly is contained in only 30 large fragments, whereas previously it was made up of approximately 13,000 pieces.

"This will be a valuable tool in a number of research areas from diversity assessments to functional genomics. It will ultimately assist researchers to efficiently identify and use genetic variation for improved productivity, disease resistance, and enhanced nutrition, and to develop varieties for industrial processing among other applications," she said.

This is good news for small-holder farmers in sub-Saharan Africa where currently the crop's production is seriously threatened by two viral diseases, cassava mosaic disease and cassava brown streak disease.

Exploring the cassava leaves value chain

While the main source of income for cassava farmers in Tanzania is through the sale of cassava roots, the leaves which are edible and rich in protein and vitamins are becoming increasingly important. However, trade in the leaves is less developed and experiences many challenges including volatility in prices and a lack of market information. Furthermore, the women play a major role in the production and processing of cassava leaves but they are not engaged on the commercial side.

This is according to Karolin Anderson, who is conducting a study to explore and describe the cassava leaves value chain and, at the same time, looking into gender relations. Karolin is an MSc student of Agricultural Development from the University of Copenhagen, Denmark, co-supervised by scientists at IITA-Tanzania. Karolin, who has been in Tanzania for three months in Kimwamindi and Nyamakalago villages in Mkuranga district, recently presented her preliminary findings at a seminar at IITA-Tanzania.

"Scientific studies show that 100 g of cooked cassava leaves provides about 3.7 g of protein which is pretty good for a green leafy vegetable. They contain essential amino acids such as lysine, isoleucine, leucine, valine, and lots of arginine — which are not common in green leafy plants thus making cassava leaves a great protein source," she said. "They contain vitamins and can play a key role in improving the nutritional status of farming communities."

She said although there had been a steady increase in trade in cassava leaves which are found in supermarkets and the local markets and a corresponding increase in demand, the farmers complained that they lacked sufficient information on markets.

Nearly half of the farmers interviewed who sell the fresh leaves sold only one-half of what they produced and the other half was for home use. This was due to insufficient market information for a majority of them. Market prices were also unstable, which discouraged many of the farmers from engaging in producing cassava leaves for commercial purposes. Other challenges identified were the lack of processing technology and the low level of awareness about their potential value.

Harvesting cassava leaves.

In terms of gender roles, Karolin said women were more engaged in the production and processing of cassava leaves than men but occupied less in their trade in the markets. The women were engaged in the harvesting and grinding of the leaves which was also done only by female retailers. In 62% of the households that were engaged in cassava leaves production the processing was all done by women. Responsibilities at home, lack of business skills, low confidence, and negative cultural norms were some of the factors that limited women's engagement in this trade.

Karolin said the cultural norms that undermined women's participation in the commercial trade in cassava leaves should be discouraged and men encouraged to support women's engagement in markets. This in turn would speed up efforts to tackle hunger and poverty.

Welcome, new staff!

Nkeki Kamai, a Nigerian, has joined IITA-Kano, Nigeria, as Coordinator N2Africa Borno State. Kamai holds a BS degree in General Agriculture from the Ahmadu Bello University, Zaria (1984), MSc degree (1994), and a doctorate degree in Crop Production and Physiology (2010) from the University of Maiduguri, Maiduguri, Nigeria.

Before he took up this appointment, he was a Lecturer at the University of Maiduguri where he conducted research work tailored toward the improvement of crop production for biotic and abiotic stresses in the Nigerian savannas. He served as a Research Supervisor (2006 -2010) in the IITA project Promoting Sustainable Agriculture in Borno State; Agronomist for Drought Tolerant Maize for Africa (DTMA) project (2008 - 2014), and Agronomist/Seed Specialist for the HarvestPlus Challenge Program (HarvestPlus Provitamin A Maize Project) implemented by the University of Maiduguri (2010 -2014).

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Simon N'cho, an Ivorian, has assumed duty at the IITA-Tamale station in Ghana as Postdoctoral Fellow – Agricultural Economist. He conducted his PhD research at Wageningen University in the Netherlands in Business Economics (2010 to 2014). He obtained his MSc degree in Economy and Sociology of rural development at the University of Abomey Calavi Benin in 2009 and an Engineer degree in Agricultural Economics at National Polytechnic Institute Felix Houphouet-Boigny (INP-HB) of Yamoussoukro, Cote d'Ivoire, in 2001.

Simon worked at Africa Rice Center from 2001 to 2010 as Research Assistant in Impact assessment economics, production economics, and policy economics at Bouake (Cote d'Ivoire), Bamako (Mali), and Cotonou (Benin). His research focused on farm performance analysis, competitiveness of value chains, technology diffusion, adoption and impact assessment.

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George Mahuku, from Zimbabwe, has joined IITA-Tanzania, as Senior Plant Pathologist for Eastern, Southern and Central Africa. George holds a BS degree in Agriculture from the University of Zimbabwe, Harare, Zimbabwe (1986), MSc degree in Plant Pathology/Virology from Texas A&M University, College Station, Texas, USA (1991), and a doctorate degree in Plant Pathology/Molecular Biology from the University of Guelph, Guelph, Ontario, Canada (1995).

Prior to his appointment, he was a Senior Scientist-Maize Pathologist for the Global Maize Program, International Maize and Wheat Improvement Center (CIMMYT). He also served as a Senior Scientist-Plant Pathologist for the Bean Improvement Program, Centro International de Agricultural Tropical (CIAT) (1998 to 2007), and a Senior Research Fellow at the Crop and Livestock Research Centre, Agriculture and Agri-Food, Canada (1997 to 1998).

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Emmanuel Oladeji Alamu, a Nigerian, has joined IITA-Zambia as Postdoctoral Fellow – Food Science/ Technology. He holds a BS degree in Chemistry and Education (1988) and MSc degree in Chemistry (1991) from the University of Ilorin, Nigeria, and a doctorate degree in Food Chemistry from Ekiti State University, Ekiti, Nigeria (2014).

Before he took up this appointment, he was a Research Administration Manager at the Crop Utilization Laboratory at IITA-Ibadan from 2009 to 2012, where he also served as a Research Associate from 2004 to 2009.

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Prasad Peteti has joined IITA-Ibadan as Breeding Database Programmer and Manager. Prasad, an Indian national, is a B.Tech (Mechanical) graduate from JNT University. He also has an Advance Diploma in Computer Application from DOEACC, Government of India.

Prior to this appointment, he worked as Programmer II at the International Crops Research Institute for Semi-Arid Tropics (ICRISAT) in Patancheru, India, and held various positions such as Programmer I, Programmer and Data Entry Associate from June 2000. He also worked as Data Manager for Tropical Legume Project I (TL I) under the Generation Challenge Program (GCP) for both chickpea and groundnut.

Prasad's office is in Building 400, 3C. Contact details: ext 2115, mobile number +234 8039784266, p.prasad@cgiar.org. He lives in Dormitory D303 on IITA Campus.

Got a story to share? Please email it with photos and captions every Wednesday 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).