IITA
Transforming African Agriculture
CGIAR

IITA news

No. 2662, 10–14 October 2022

Researchers support efforts to increase agricultural productivity of women in Malawi

Women contributing to agricultural production through plantain farming.

Despite the increasing recognition of women's contribution to agricultural production, there are still factors limiting their agricultural productivity. It is widely known that male farmers have more access to productive assets and support services than female farmers.

Hence, gender gaps in access to non-land agricultural input, technology, and extension services create noticeable differences in productivity between women and men in low-income countries.

to page 3

IITA builds capacity of Congolese nationals on sustainable seed systems and pest and disease diagnostics

Visiting a cassava multiplication site in DR Congo.

Within the framework of the ATAC and the Development of Commercial Agriculture projects, funded respectively by the African Development Bank (AfDB) and the World Bank in Congo Brazzaville, 12 officers from the Ministry of Agriculture, the National Research Institute (IRA), the National Center for Improved Seed (CNSA), and the National Center for the Management of Crop Diseases (CNLMC) were trained across four IITA stations in DR Congo, Nigeria, Tanzania, and Zambia, with the objective of strengthening the capacity of the Agricultural Officers so that they could train others in their home country, the Republic of Congo.

The workshops in DR Congo, Nigeria, and Zambia covered various themes and incorporated presentations and interactive discussions. The trainees were familiarized with sustainable seed systems to raise awareness on seed quality, explaining different approaches to produce cassava planting materials, maize and soybean seeds, and the integrated management of seed multiplication fields. They also received practical instruction on operationalizing seed certification standards, including quality declared seed (SQD), protocols, and quality control mechanisms. Additionally, participants visited fields where maize, soybean, and cassava planting materials for the ATAC/PRODIVAC project would be sourced for introduction to Congo-Brazzaville for multiplication.

In Tanzania, participants were trained in cassava pest and disease diagnostics in both the field and lab and in methods to improve the quality of cassava seed systems. They learned about cassava pests and diseases, how to identify their symptoms, and the damage they cause in the field. The trainees learned how to apply digital tools in the field to identify pest and disease damage, the laboratory methods for detecting and identifying cassava viruses and their whitefly vector and the methods applied at country level to strengthen cassava seed systems.

By the end of the training, the field and classroom tests demonstrated that the trainees had absorbed a large amount of new information. Trainees expressed their enthusiasm for the training provided and were keen to continue to interact with the team of trainers. The capacity-building initiative also required follow-up training to be conducted locally in the Republic of Congo to ensure that the training elements were being implemented and reinforced. *Contributed by Dr Apollin Fotso*

Top: The Congolese trainees at an IITA-Tanzania laboratory. Bottom: Training participants, during a field visit in Zambia.

Take responsibility! Stop the spread of COVID-19!

Always clean your hands; practice physical and social distancing; wear face masks properly; avoid crowds and public places; keep a 2-meter distance from the next person; and practice general sanitation and hygiene.

Got a story to share?

Please send your story with photos and captions every Tuesday to iita-news@cgiar.org or Katherine Lopez (k.lopez@cgiar.org) and Uzoma Agha (u.agha@cgiar.org).

Radio IITA
Knowledge for Agriculture

Researchers support efforts to increase agricultural productivity

continued from page 1

To understand the gender differences in adopting improved technologies and agricultural productivity, gender researchers from IITA-CGIAR conducted a study in Malawi using national representative data collected from 1600 households and 5238 plots. The team, led by Adane Tufa, Agricultural Economist at IITA Malawi, analyzed the gender differences in the adoption of improved technologies, including intercropping, use of improved varieties, crop rotation and residue retention, manure use, and minimum tillage. They also analyzed the gender differences in agricultural productivity, using an exogenous switching regression (ESR) model and recentered influence function decomposition.

The study revealed that female plot managers were more likely to adopt intercropping due to their preferences for producing diverse crops used for home consumption. Women's contributions in carrying out other productive work, including multiple domestic and caregiving tasks, made intercropping an attractive technology for uptake by women in Malawi, as it reduces the need for weed control. However, male plot managers were more likely to use improved varieties and adopt crop rotation and crop residue retention.

The result also showed that productivity was lower for female plot managers than male plot managers. This may be due to differences in access to assets and technologies and differences in labor productivity for male and female farmers. The gender productivity gap result also indicated that female plot managers have a relatively low endowment advantage of 8.2% and a much greater structural disadvantage of 23.1% than male plot managers. The researchers suggested that even if female and male plot managers have the same amount of resources, other unmeasured differences hinder women from making the best use of their resources.

The research recommended that efforts to close the gender productivity gap should go beyond creating equal access to resources to facilitating women's empowerment for comparable productivity outcomes. These efforts should demand that policies and programs use gender-transformative approaches to enhance women's decision-making and negotiation skills. It should also address the gender norms and power relations that restrict women from utilizing and benefiting from the resources they could access. *Contributed by Ochuwa Favour Daramola*

AVISA project showcases improved crop varieties at Farmers' Field Day

Field days are farm events organized by producers and agricultural institutes to educate farmers on good agricultural practices (GAP) and promote the adoption of recommended improved crop varieties by smallholder farmers.

The Accelerated Varietal Improvement and Seed Delivery of Legumes and Cereals in Africa (AVISA) project organized a farmers' field day on 7 October on its Cowpea demonstration plots to showcase GAP as part of increasing consumer awareness and access to improved cowpea varieties in the project.

The cowpea demonstration plots are situated in the Bichi LGA of Badume Community of Kano State. Thirty-four farmers and three growers participated in the field day, which focused on GAP for enhanced production of climate-smart improved cowpea varieties (FUAMPEA1 and SAMPEA 14) introduced to the community. The farmers were amazed to see the two new cowpea varieties completely free of the parasitic weed (*Striga gesnerioides*) while their existing variety, used as farmers' choice, was devasted by *Striga.*

Top: A Farmer at the field day. Bottom: IITA Seed Systems Agronomist Professor Lucky Omoigui speaking at the cowpea demonstration site.

The participating farmers now have enhanced knowledge of good practices and access to climate-smart varieties. They will share their learnings with neighboring farmers by disseminating the technology for enhancing cowpea production in the areas.

In his welcome remarks at the AVISA Farmers' Field Day ceremony, IITA Seed Systems Agronomist Lucky Omoigui gave an overview of the project and a cowpea demonstration. Omoigui emphasized the essence of the field day and the new varieties introduced to increase yield (productivity) and incomes and livelihood of the smallholder farmers.

He advised the farmers to take advantage of the varieties to improve their yield and encourage more women to participate in producing the new cowpea varieties in the community to avoid being marginalized. The AVISA project emphasizes inclusiveness so that both men and women can have improved livelihoods. Among the varieties introduced to the community, the farmers were very impressed with the performance of FUAMPEA1 and SAMPEA14, more importantly, due to their early maturing and high pod load, which will translate to high grain yield.

All the farmers expressed their gratitude, and when asked which of the varieties they preferred, they said FUAMPEA1 and SAMPEA14 instead of their own farmers' choice cultivar. They promised to continue good agricultural practices to maximize the yield potential.

The AVISA project is funded by the Bill & Melinda Gates Foundation, implemented by OneCGIAR—International Maize and Wheat Improvement Center (CIMMYT), International Center for Tropical Agriculture (CIAT), and IITA—in partnership with Syngenta Foundation for Sustainable Agriculture (SFSA), private seed companies, and the National Agricultural Research System (NARS). *Contributed by Sarah Sallau*

Participants at the AVISA Farmers' Field Day.

Her+ initiative builds women's agricultural resilience for climate change

Women are key drivers of climate change solutions, but gender inequalities seem to stand in their way. "How can we close gender gaps and achieve climate resilience for all?" This question powered discussions at the First High-Level CGIAR Dialogue focused on gender and climate change in Africa. The meeting took place at the International Livestock Research Institute (ILRI) campus, Nairobi, on 7 October. It revealed how the new CGIAR Harnessing Equality for Resilience in the Agrifood System (HER+) Initiative is creating opportunities to help women build agricultural resilience for climate change.

Participants at the First High Level CGIAR Dialogue at the ILRI Campus in Nairobi.

Highlighting the objective of the HER+ Initiative, CGIAR Gender Platform Director Nicholine de Haan stated that the initiative pursues women's economic empowerment agenda that is inclusive through greater agency, equal opportunities, access, and control over resources.

During the first discussion session, team leads of the four work packages under the Her+ initiative highlighted their activities. CGIAR Gender Strategic Communications and Content Lead, Marianne Gadeberg, and CGIAR Gender Global Engagement and Policy Lead, Vivian Atakos, moderated the session.

IITA Senior Scientist and Gender Specialist, Steven Cole, said that the CGIAR research program started the Gender Equality Transformation Work Package to design gender-transformative approaches in food systems. He stated that the package designs different tools to carry out qualitative and quantitative research. This will help create gender transformative approaches that give women the opportunity to build agricultural resilience for climate change. "We hope that through this work we can put together a range of different tools for actors to scale agricultural transformation," he added.

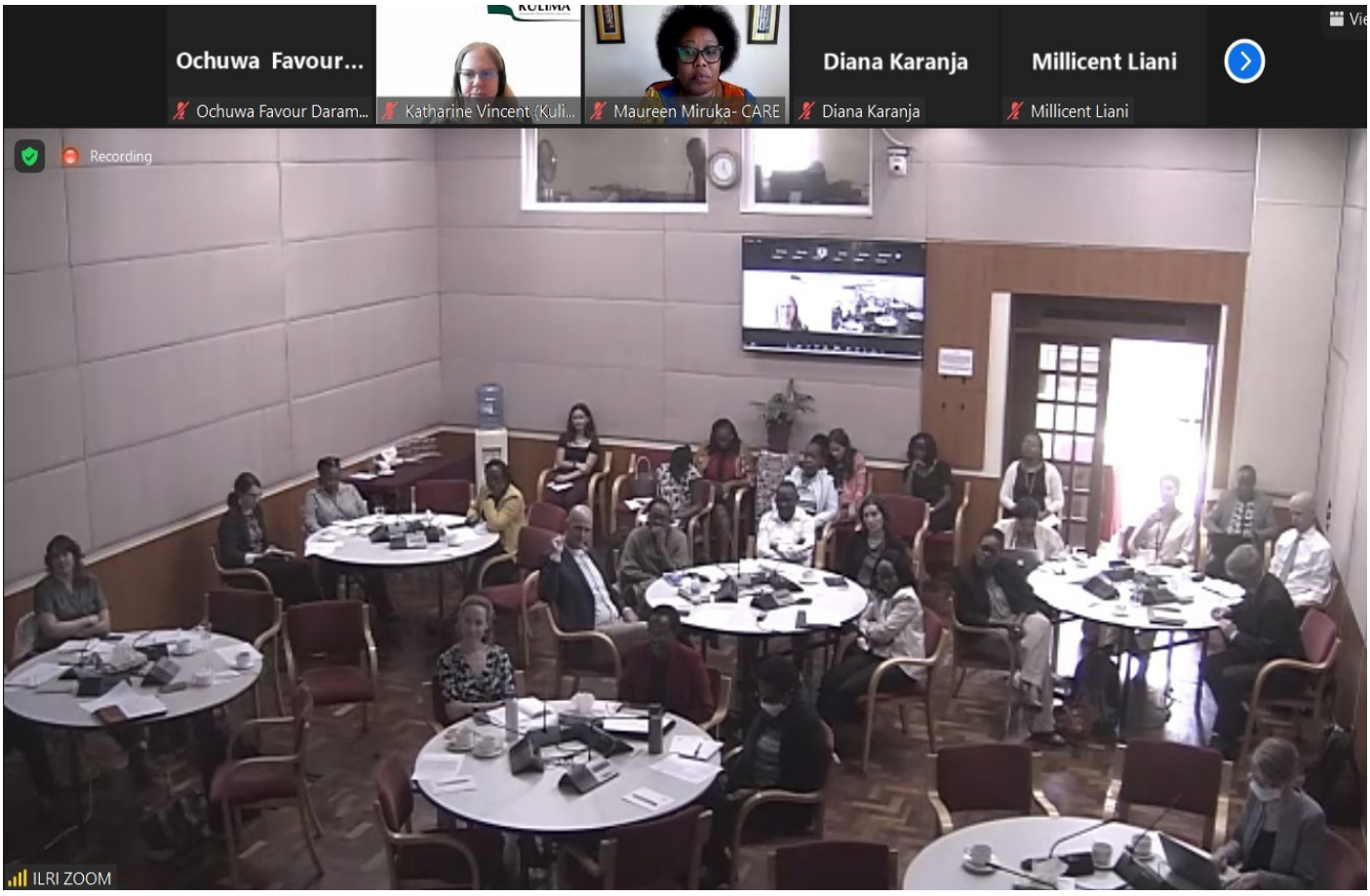
India Country Representative and Research Leader for Gender and Livelihoods at International Rice Research Institute (IRRI), Ranjitha Puskur, spoke on the Power Work Package, which focuses on technology-based pathways to bring about the needed transformation in agriculture. She explained that technological advancement had left a lot of gender groups behind, including women, due to social, political, and economic norms and barriers limiting them from accessing these technical innovations. Puskur advised that innovations should be combined with approaches that break these norms to accelerate access by women and other vulnerable groups to become resilient and empowered. "It is not only about women being able to access these technologies but also making them drivers of climate change in their communities," she said.

Deputy Division Director at International Food Policy Research Institute (IFPRI), Daniel Gilligan, spoke about the Gender Responsive and Social Protection Work Package. He described the package as one made to address gender gaps, starting with social programs. He stated that there is a growing stakeholders' interest in helping women build resilience in climate change. Hence, his team is working with the government and other partners to test how social protection can address the root cause of women's vulnerability and risk.

IFPRI Senior Research Fellow Katrina Kosec gave highlights of the VOICE-Promoting Inclusive Governance Work Package. She said the team is working on how stakeholders and policies can support women's resilience in climate change. Kosec added that there is a need for indicators and tools that can track women's voices and support agencies that promote women's voices. "The responsiveness of policymakers to women is important," she concluded.

Following the presentations was a panel discussion with Gender and Development Expert at CARE International, Maureen Miruka; Director of KULIMA Integrated Development Solutions, Katherine Vincent; Advisor at GIZ, Hanna Ewell; Kenya Gender Focal Point for UNFCC, Jackline Makokha; and ILRI Climate Change Principal Scientist, Todd Craine. The session discussed directions for gender and climate change research in Africa.

Lilian Kirim, Senior Research Fellow and Research Coordinator at Tegemeo Institute of Agricultural Policy and Development, Egerton University, rounded off the meeting, stating that women are more intensely affected by climate change and policy. This makes it necessary to ensure that research is impactful by producing appropriate smart climate solutions that are gender responsive. She also advised that the government and other stakeholders in the food system are engaged early enough in research. *Contributed by Ochuwa Favour Daramola*



CARE International Gender and Development Expert, Maureen Miruka, speaking as a panelist on the direction of gender and climate change research in Africa.

IITA trains food processors to improve health and nutrition using provitamin A-rich plantain flour in Gabon

Food processors in Libreville, Gabon, recently participated in a training on the use of provitamin A rich plantain flour to alleviate Vitamin A deficiency in vulnerable groups. IITA-Cameroon Visiting Scientist Apollin Fotso Kuate led the workshop, which took place on 30 September under the framework of the project—Enhancing nutritional quality of plantain food products through improved access to endophyte primed and high provitamin A plantain cultivars under integrated soil fertility management practices in Nigeria, Cameroon and Gabon. Forty-one participants (30 men and 11 women) from the National Consultation of Producers of Gabon (CNOP-GA), researchers from IRAF, WAVE program, and the Gabonese Food Security Agency attended the training under the plantain project funded by the European Union through the African Union.

The workshop's first module focused on the provitamin A content of the plantain varieties found in Gabon, following analyses of green and unripe plantain samples. The second module focused on vitamin A sources and risk factors for vitamin A deficiency in the vulnerable group, particularly in children under five years of age, as well as post-harvest plantain management, promotion of plantain-based composite flour, the basics of food processing, and sun drying.

The training course was dynamic and based on the contributions and needs of each participant. Discussions during the training provided these participants with an in-depth knowledge of plantain flour production and its application as a substitute for wheat flour in various foods. As the pre- and post-test questionnaires were used to assess the basic knowledge of these participants, the result showed that their knowledge of plantain, post-harvest technology, and food processing increased by about 80% after the training.

Speaking at the end of the training, the representative of the farmers' organization, Phil Philo, said the training allowed the participants to know about the plantain flour that can reduce dependency on wheat flour. He believes there are opportunities to develop the banana value chain in Gabon.

The IITA-led project is implemented in collaboration with Gabon's Institute of Agronomic and Forestry Research (IRAF/CENAREST), Nigeria's National Horticultural Research Institute (NIHORT), and Cameroon's University of Buea. The project's goal is to sustainably enhance the adoption, productivity, and utilization of endophyte-primed high provitamin A plantains cultivars and hybrids in the context of integrated soil fertility management in smallholder farms in Nigeria, Cameroon, and Gabon.

Contributed by Dr Apollin Fotso

Top right: IITA Scientist Apollin Fotso Kuate speaking with the media during the training.
Bottom: Workshop participants with facilitators at the food processors' training in Libreville, Gabon.

ENABLE-TAAT highlights opportunities along the OFSP value chain

As part of efforts to help youths access opportunities in agribusiness, ENABLE-TAAT, the youth in agribusiness compact of the Technologies for African Agricultural transformation (TAAT), recently organized a symposium on orange-fleshed sweet potato (OFSP).

The symposium, moderated by the compact Communication and Advocacy Officer, Omodolapo Ogunsola, was centered on agribusiness opportunities along the OFSP value chain.

IITA Nigerian National Food Consumption & Micronutrient Project (NFCMS) Dietary Intake Lead, Phorbee Olapeju, facilitated the workshop as she exposed the participants to the technology, benefits, and reasons for improving already existing staple crops. "Sweet potato is a unique crop, but some call OFSP a miracle crop. Not only is it healthy, but it is also a great source of wealth generation. Youths should learn to leverage the awareness they have and not waste it," she stated.

Top: TAAT Program Management Unit Coordinator Chrys Akem speaking to participating youth at the OFSP demonstration field. Bottom: Orange-fleshed sweet potato harvested from the ENABLE-TAAT OFSP demonstration plot.

ENABLE TAAT Business Development officer Idowu Osun led the second phase of the seminar on the OFSP demonstration field at the IITA-Ibadan campus. "ENABLE-TAAT is focusing on reducing youth unemployment. This workshop is to establish a relationship between the youth agripreneurs and value chain experts, and work with them in whatever value chain they are interested. We will also form clusters and cooperatives for those interested," he said.

In an interview with some of the participants, they expressed the contentment and insight derived from attending the seminar. Sheila Moor, director, Food Army Nigeria, said attending the workshop was vital in gathering information for her start up "OFSP has always been fascinating to me, and I knew I had to be here when I learnt about the workshop. I intend to gather as much information I can to train those willing to explore the crop", she said.

A farmer, Babatunde Olasupo, said he was willing to take up producing and processing the crop. "I am a farmer; I attended this workshop to gather information as I intend to go into the production and processing of this crop in the next couple of days. I am willing to give OFSP a trial and see how it turns out," he explained.

TAAT TAAT Program Management Unit Coordinator Chrys Akem explained that while TAAT is not a research project, the initiative is to disseminate research outputs to transform livelihoods. He further expressed his delight on the leverage of the youth compact to work on any commodity. "The youth are not restricted to work with only IITA mandate crops, and they have made it an annual practice to work on a particular crop. They highlight it, have a field day like this and expose people to it. Once there are interested persons in the project, the objective is achieved," he concluded as the participants witnessed the on-site exposition of the crop's value chain. *Contributed by Tolulope Akinola*