



A newsletter of the African Agricultural Technology Foundation

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## Need to scale up climate smart technologies for agricultural transformation in Africa



*Dr Denis Kyetere, Executive Director, AATF*

Climate change has brought important and interesting changes that the agricultural sector has to adapt to. While some areas have indeed witnessed increase in rainfall, majority of the areas in Africa have had depressed rainfall and worse, an increase in number and severity of droughts.

This is a huge problem considering that majority of smallholder farmers in Africa rely on rain-fed agriculture. Africa must therefore invest in climate smart agriculture that sustainably increases productivity, enhances resilience or adaptation, and reduces greenhouse gas emissions.

The good news is that there are both traditional and innovative smart agricultural technologies in Africa. Mulching, intercropping, conservation agriculture, and pasture and manure management are examples of traditional techniques. Innovative practices, programs, and policies helping farmers to adapt to climate change include improved crop varieties, better weather forecasting, and risk insurance.

'Widespread adoption of sustainable agricultural practices will increase soil fertility and productivity, enhance resistance to drought and extreme weather, and have better capacity to adapt to climate change while creating sustainable landscapes and building momentum towards climate-smart food systems,' said Dr Denis Kyetere, Executive Director, AATF while addressing delegates at the Sixth [African Green Revolution Forum \(AGRF\)](#) that was held from 5-9 September, 2016 in Nairobi, Kenya. He was a panellist at an AGRF side event on Showcasing Models with Potential to Deliver dubbed, *Transformative Models for Scaling Up in the Face of Climate Change*.

Other panellists included Mr Will Warshauer, President and CEO, [Technoserve](#); Dr Moses Ikiara, Managing Director, [Kenya Investment Authority](#); Dr Juliette Biao Koudenoukpo, Director, Regional Office for Africa, [United Nations Environmental Programme](#); Engineer Patrick Nduati Mwangi, Principle Secretary, [Ministry of Irrigation](#), Kenya; and Hon. Kassoum Denon, Minister of Agriculture, Mali.

# Data portability: Often ignored yet critical to commercialization of biotech products

On 9 March this year, stakeholders in the biosafety regulatory field launched the Association of National Biosafety Agencies in Africa (ANBAA), in Nairobi, Kenya. At the heart of the formation was the desire and expectation that the new association will reduce hurdles in sharing and utilization of data and information between the Biosafety agencies to fast-track decision making on commercialization of agricultural biotechnology products.

The push for data sharing or data portability comes at a time when most countries undertaking research and commercialization of agricultural biotechnology products are either not aware of or are not comfortable with building on what has already been generated elsewhere for use in decision making towards commercialization.

‘When universal procedures are applied such as those from the [International Organization for Standardization](#), [National Institute of Health](#), the [Joint Research Centre of the European Commission](#), the guidance documents of the [Organization for Economic Cooperation and Development](#) as well as [Codex Alimentarius Commission](#), data should be usable wherever such procedures are accepted,’ said Abed Mathagu, Programme Officer, Regulatory Affairs, AATF during the [5th Annual National Biosafety Conference](#) that was held from 15-18 August, 2016 in Nairobi, Kenya.

Data sharing is central to all scientific communities. Nobody needs to re-invent



KALRO staff collecting data on performance of the Bt maize of one of the CFTs at KALRO-Kiboko Research Station



KALRO staff entering data after harvesting one of the CFTs at KALRO-Kiboko Research Station.

the wheel, which is often costly and time consuming with results only confirming what was initially concluded.

‘Innovations build on primary data generated in different places as long as the portable data is credible and reliable, peer reviewed, from competent research organisations or even regulatory authorities using information from previous regulatory approvals,’ said Abed.

Seven months after the launch of ANBAA, regulatory agencies in Africa are still demanding for new data on events that have already been characterized by certified and globally recognized agencies. Is it really necessary or is it a case of reinventing the wheel?

A case in point is the joint application by AATF and the Kenya Agricultural and Livestock Research Organization (KALRO) for the Commercial Release of Bt maize in Kenya. The big question is whether all the information required in the prescribed form should be generated afresh and how much of the publicly available data is admissible.

‘The MON810 for instance is a well characterized event commonly cultivated in released varieties across the globe and has been commercialized as a product of modern biotechnology for 20 years. Enormous data is available for well characterized and widely used events such as Cry1Ab, Cry1Ac and EPSPS among others. There was no need to start from scratch,’ argued Mathagu.

Ironically, Kenya is one of the countries that permit data portability. Section 28 of the Kenyan Biosafety Act. No 2 of 2009 clearly states, ‘The National Biosafety Authority may opt not to undertake a risk assessment... where it determines that sufficient experience or information exists.’

Section 5(3) of the environmental release regulations also states, ‘An applicant may refer to data or results from an application previously submitted by another applicant, provided the information, data and results are non-confidential or such applicants have given their agreement in writing.’

However, even where regulatory authorities may want data regenerated in their jurisdictions, they must have a clear rationale and expected outcome that is different from the previous studies or experiments, and sufficient reason as to why the applicant needs to conduct further trials when this has already been done in a similar ecological zone.

‘It is our hope and desire that ANBAA lives up to its overall spirit to ease the biosafety regulatory environment in Africa. Enhancing collaboration between the regulatory agencies, and ultimately facilitating sharing and utilization of data and information on agricultural biotechnology products will greatly enhance safe and responsible work in agricultural biotechnology research and development and greatly ease the burden of commercialisation of GMOS in Africa,’ said Mathagu.

# African governments urged to establish favorable Biotech regulatory regimes

African governments have been urged to establish predictable, robust and science-based biosafety policies to facilitate the introduction and adoption of transgenic crops. Dr. Francis Nang'ayo, Senior Manager, Regulatory Matters, AATF made the call in a paper presented at a side event during the Forum for Agricultural Research in Africa (FARA) - 7th Africa Agriculture Science Week held in Kigali, Rwanda from 13-16 June 2016.

Nang'ayo decried the low uptake of biotechnological interventions in the region in his paper, Taking GM crops to the market in SSA: Special Focus on Policy and Regulatory Environment. 'This is ironical considering so many countries in Sub Saharan Africa have been struggling for decades with unsolved farm productivity problems some of which could be addressed through biotechnological interventions. Biotechnology tools are crucial in efforts to produce crops that are climate smart, insect resistant, nutritious and disease resilient.'

The AATF organised side event was held on 13 June 2016. It attracted 41 leading scientists and policy experts who discussed how African countries are dealing with the shifting scientific and policy environment on GM crops.

Despite the demonstrated benefits of agricultural biotechnology, biotechnology regulatory environment in most African countries are predominantly precautionary, ranging from policy restrictions of various kinds to outright bans. Due to these restrictive regulatory environments only three countries grow GM crops: South Africa (maize, soybean and cotton), Sudan and Burkina Faso (cotton).

'There is need for African countries to build their biotechnology capacities to facilitate increased use of the technology by national agricultural research systems to improve priority crops as one way of redoubling agricultural productivity to fight hunger and poverty,' stated Nang'ayo.

Panellists during the session offered different perspectives on the theme: Dr. Stephen Mugo, Principal Breeder and Regional Liaison Officer, the International



*Dr. Gilbert Bor, a Kenyan farmer contributes during the panel discussion. (From left) Mrs. Nancy Muchiri, Senior Manager, Communications and Partnerships, AATF; Dr. Stephen Mugo, Principal Breeder and Regional Liaison Officer, the International Maize and Wheat Improvement Center (CIMMYT); and Dr. Francis Nang'ayo, Senior Manager, AATF Regulatory Matters.*

Maize and Wheat Improvement Center (CIMMYT) on a breeder's perspectives; Dr. Marc Ghislain, a Senior Biotechnologist and leader of the global research program for Game Changing Solutions and chair, Institutional Biosafety Committee, International Potato Center (CIP) on socio-economics perspectives; Dr Oumar Traore, Head of Crop research Department, Environmental Institute for Agricultural Research (INERA) on real experience in commercializing a GM crop; Mrs. Nancy Muchiri, Senior Manager, Communications and Partnerships, AATF on communication and outreach perspectives; Dr. Gilbert Bor, Kenyan farmer on a farmer's perspectives; and Mr. Gilbert Gumisiriza, Biosafety Officer, Uganda National Council for Biosafety Risk Assessment and Regulation, on regulatory affairs perspectives.

Participants stressed the importance of effective communication and advocacy for successful biotechnology research, development and deployment. This is particularly in creating awareness and

understanding, product promotion, issues management and creating product acceptance among farmers who are key end users of crop technologies.

The side event made three recommendations to FARA to help fast track the establishment of functional, predictable biosafety policy regimes for release of GM crops in Africa:

1. Intensify engagement of African policy makers and regulators to prop functional and facilitative policy and regulatory systems for testing and uptake of demand driven GM crops;
2. Increase farmer and consumer education for enhanced public understanding and acceptance of biotechnology, including GM technology;
3. Coordinate collaborative efforts to ensure full adoption and implementation of the recommendations of the African Union High-level Panel on Biotechnology by member states.

# Hack4Farming Nairobi 2016: Inspiring Technological Intelligence for Seed Companies

Over 70 data analysts, computer programmers, developers, seed company representatives, and stakeholders, came together during a three-day Hack4Farming 2016 Hackathon in Nairobi, Kenya to explore digital solutions to address challenges faced by East African seed companies.

The event, held from 29-31 July, 2016 was organised by aWhere, iHub and IOTA. It was hosted by the Hybrid Rice: Breeding by Design Project, which is funded by the Bill & Melinda Gates Foundation.

aWhere initiated Hack4Farming series to tackle the challenge of providing information and communication technology insights that are current, relevant, and specific to the farmer's location and circumstances.

At Hack4Farming2016 Nairobi, seed company representatives presented their most pressing information challenges to teams of Nairobi-based software developers. The software developers, who were aggregated into seven teams, were challenged to design, prototype, and pitch solutions to the challenges with 48 hours.

The solution was to identify the business challenge, provide a prototype or proof

of concept for the solution, and address the sustainability of the solution through a business plan and proposal outline.

Team MbeguBora was overall winner of the \$2000 USD grand prize for their idea to build web-based and mobile application that provide services to efficiently connect farmers to agents and seed companies, and to minimize agricultural information gaps through seed variety recommendations and plot monitoring reports.

Team AgData was also awarded a special prize of \$1000 USD for being the best example of big data integration for designing a crop monitoring system that uses blockchain technology along with agronomic and weather data to inform farmers and seed companies how they can improve seed-related decisions.

Dr. Kayode Sanni, Rice Project Manager AATF who was a member of the panel



Dr. Kayode Sanni (in a suit), Rice Project Manager, AATF and Ms Leila Al-Hamoodah, Data Analyst, aWhere with members of Team MbeguBora, the overall winners of the Hack4Farming Nairobi 2016 Hackathon.

of judges said technology innovation is a way of encouraging and enticing young people into agriculture. 'Young graduates cannot use cutlers and hoes like our forefathers. Innovation that will make them feel fulfilled is what will encourage them to go into agriculture,' he said calling on governments to ensure there are good facilities, internet connectivity, good electrification and water systems in the rural areas so that the young people in rural areas do not feel they are missing out on same benefits as their peers in urban areas.

## WEMA trains KALRO scientists on Intellectual Property



The Legal and Licensing Team of the Water Efficient Maize for Africa (WEMA) Project trained scientists from the Kenya Agricultural and Livestock Research Organization (KALRO) on Intellectual Property Management during 8 and 9 September 2016.

The training, which was held at KALRO-Thika Horticultural Institute, brought together breeders and other scientists from five KALRO research dealing with crops research: Biotechnology, Food Crops, Horticulture, Coffee, and Tea Research Institutes.

The training focused on various aspects of Intellectual Property including Patents, Trademarks, Copyright and Plant Variety Protection (PVP) and how to use them for development. They were also guided through the Draft KALRO Intellectual Property Policy.

A key focus of the training was on how the scientists could use the Plant Variety Protection in Kenya considering that many of them had developed or were in the process of developing new varieties.

WEMA is funded by the Bill & Melinda Gates Foundation, Howard G. Buffett Foundation, and the United States Agency for International Development.

# Edging closer to commercialising the first indigenous hybrid rice in Kenya

Rice farmers in Kenya could have access to the pioneering indigenous hybrid rice in Sub Saharan Africa by 2018 following entry of 15 hybrids into the national performance trials (NPTs) by the [Hybrid Rice: Breeding by Design project](#).

The varieties which have been developed using the 2-line rice hybrid technology with funding from the [Bill & Melinda Gates Foundation](#) have the potential to produce more than 7 tonnes per hectare, almost four times more than average yield of other improved varieties.

The NPTs which will be conducted over two growing seasons are being carried out in five sites in Kenya – Bondo and Kisumu in western Kenya, Hola and Malindi in the coastal region, and Mwea in central Kenya. The Kenya Plant Health Inspectorate Service ([KEPHIS](#)) is supervising the NPT's being carried out by Hybrids East Africa Ltd (HEAL).



*A farmer weeds her 2-line hybrid rice demonstration plot at Ahero Irrigation Scheme, Kisumu County, western Kenya in July 2016.*

The Hybrid Rice project expects to be through with the first set of NPTs by December 2016, and immediately commence the second season of the trials. The distinctness, uniformity and stability (DUS) trials will be done after the NPTs.

The project is further evaluating the performance of another 127 rice hybrids for advancement to national performance trials, according to Dr Kayode Sanni, Project Manager, Hybrid Rice, AATF.



*Ms Faith Musymi (in green overcoat), an Inspector with KEPHIS and Ms Electin Wafula (in green gumboots), 2-line Rice Breeder from HEAL supervise the planting of one of the NPTs at Mrs Florence Warui's farm in Mwea, Kirinyaga County, central Kenya on 29 September, 2016.*

# AATF calls for speedy licensing of NPTs for WEMA Bt Maize in Kenya

AATF and partners have urged the National Environmental Management Authority ([NEMA](#)) to expedite the issuance of the license for the national performance trials (NPTs) of the Water Efficient Maize for Africa ([WEMA](#)) genetically modified maize in Kenya.

"We strongly desire that Kenyan farmers benefit from WEMA Bt maize hybrids from 2017. We look forward to receiving timely license from NEMA to allow us proceed to NPTs during this year's short-rains," appealed Dr Sylvester Oikeh, WEMA Project Manager, AATF.

Oikeh made the appeal at the first African Biosafety Leadership Summit held from 15 – 16 August 2016, Nairobi, Kenya. He noted that WEMA Project, which is funded by the [Bill & Melinda Gates Foundation](#), the [Howard G. Buffett Foundation](#), and the [United States Agency for International Development](#),

has implemented its activities in Kenya and the other four project countries – Mozambique, South Africa, Tanzania and Uganda - in compliance with regulations set by national regulatory agencies.

Although NEMA has approved the Environmental Impact Assessment (EIA) report for the NPTs and even communicated the same to the applicants

Kenya Agricultural and Livestock Research Organization ([KALRO](#)) and AATF, it has not given the prerequisite license that will allow Kenya Plant Health Inspectorate Service ([KEPHIS](#)) to conduct the trials. Early this year, Kenya's [National Biosafety Authority](#) approved environmental release of Bt-maize with a condition to conduct and present an EIA Project Report to NEMA.



*Dr Murenga Mwimali (in blue shirt), the WEMA-Kenya Coordinator and Regina Tende, maize breeder with KALRO taking visitors through the process of artificially infesting the WEMA Bt maize during the confined field trials at KALRO-Kiboko Field Station on July 8 2012.*

# Demystifying biotechnology for journalists and extension officers

A biotech communication and sensitisation workshop for journalists and extension officers from central Kenya region was held in Embu Town, Embu County from 7 – 8 July 2016 attracting 30 participants from agricultural extensions agencies, the media and seed companies. The participants were drawn from Nyeri, Muranga, Embu, Tharaka-Nithi, Meru and Kirinyaga counties.

The workshop, organised by AATF in collaboration with the Kenyan Agricultural and Livestock Research Organisation (KALRO) and the Ministry of Agriculture, introduced participants to modern biotechnology and its governance in Kenya; updated them on the status of biotechnology in Kenya; exchanged ideas on how to communicate effectively on issues of agricultural biotechnology; and discussed the various roles the participants can play in communicating biotech policy issues.



The Chief Guest, Hon. Daniel Karaba, Senator Kirinyaga County addressing the participants. (From left) Dr Grace Murilla, Centre Director, Biotechnology Research Institute, KALRO; Patrick Muriuki, Managing Director, Integrated Community Organization for Sustainable Empowerment and Education for Development and Ms Jane Otadoh, Assistant Director of Agriculture, Ministry of Agriculture, livestock and Fisheries, Kenya

The Chief Guest, Hon. Daniel Karaba, Senator Kirinyaga County called for the adoption of Bt maize in Kenya to help address the unending problems of stalk borers that reduce farmers' yields.

He pointed out the need to inspire the political class in the country to appreciate the importance of biotechnology in enhancing food production.

# Malawi inches closer to adopting Guidance Document on registration of bio-pesticides

Malawi is set to become the first country in Sub Saharan Africa to use the Guidance Document on Registration of Bio-pesticides in Sub-Saharan Africa following formation of a working group to review and finalise on the Document developed by AATF through the Aflatoxin Control in Maize and Peanuts Project.

The finalised document will be used to develop guidelines for registration of biopesticides in Malawi.

AATF, in collaboration with the United States Department of Agriculture's Foreign Agricultural Service (USDA-FAS), is facilitating pesticide registration agencies

and other stakeholders in crop protection in the registration of Aflasafe.

Aflasafe is an effective and safe biological control product which reduces the prevalence of aflatoxins in treated maize and groundnut by 80-99 percent.



# Impacting skills in cassava mechanisation and modern agricultural practices

Tractor operators, project coordinators and extension officers under the Cassava Mechanization and Agro-processing Project (CAMAP) project in Nigeria were beneficiaries of a training on cassava mechanisation and modern agricultural practices from 13-18 June, 2016 at the National Centre for Agricultural Mechanisation (NCAM), Kwara State, Nigeria.

The training, organized by AATF in collaboration with the Federal Ministry of Agriculture and Rural Development, through NCAM, covered various topics including agronomy; tractor operation, repairs and maintenance; techniques of agricultural land clearing and selection of machines for field operation.

CAMAP, funded by UKAid, seeks to transform the cassava sector in Sub-Saharan Africa (SSA) by enhancing commercial production, processing and market linkages based on business models that engender sustainability. It also aims to address key constraints to cassava



An instructor takes the trainees through procedures for good tractor operations and maintenance.

production in Africa, related to limited use of improved varieties, poor agronomy, and lack of mechanization and processing.

According to Mr George Marechera, Business Development Manager, AATF, mechanisation gives best results when combined with good agronomic practices m- use of improved stems and fertilizer,

frequent weeding and right planting and harvesting times.

'We have seen cassava yields increasing from 7 – 9 tons/ha to between 25 to 34 tonnes/ha in Nigeria and 25 - 44 tonnes/ha in Zambia and Uganda under mechanization and with good management,' says Marechera.

# OFAB Chapter Accountants trained on sound financial management

AATF recently held a training workshop for accountants managing Open Forum on Agricultural Biotechnology (OFAB) project funds at country level. The aim of the training was to forge a common understanding on financial management of OFAB funds and consequently multiply the effectiveness, output and impact of funds invested through OFAB, a project funded by the Bill and Melinda Gates Foundation.

The training took place in Addis Ababa during 8 and 9 June 2016 at the sidelines of the 2016 OFAB Annual Review and Planning Meeting. The training helped participants to identify the compliance issues with regards to financial management of OFAB project funds; define the reporting requirements of the project and adopt uniform reporting guidelines; underscore the role of the Finance Teams in budgeting, budget control and reporting; brainstorm on the challenges encountered in ensuring proper financial management

***'When money realizes that it is in good hands, it wants to stay and multiply in those hands.'***  
*Idowu Koyenikan.*

and possible solutions; and create a common understanding on management of OFAB project funds.

It was attended by all the six OFAB country chapter accountants: Mr Anthony Nderitu, Chief Accountant, the International Service for the Acquisition of Agribiotech Applications; Ms Teddy Heriel Lyimo, Accountant, Tanzania Commission for Science and Technology; Mr Siasia Ebi, Deputy Director, Accounts and Finance,

National Biotechnology Development Agency, Nigeria; Mr Issaka; Dr. Batiemo B. Joseph, Principal Investigator, Pod-borer Resistant Cowpea Project, INERA; Nebiyut Temtime, Projects Finance Coordinator, Ethiopian Institute of Agricultural Research; and Emmanuel Brakoh, Director of Finance, the Council for Scientific and Industrial Research, Ghana. It was facilitated by Mr Amos Kimebur, Accounting Officer, AATF.



(From left) Mr Kimebur, Mr Nderitu, Ms Lyimo, Mr Ebi, Mr Issaka, Dr. Joseph, Mr Temtime and Mr Brakoh.

## WEMA-Tanzania team trained on stewardship and CFT compliance



Tanzania has initiated a series of activities in readiness for planting of the first confined field trial (CFT) of genetically modified (GM) maize in Tanzania under the Water Efficient Maize for Africa (WEMA) project. This follows

approval by Tanzania's Biosafety Authority allowing the Commission for Science and Technology (COSTECH) to carry out CFTs for the drought tolerant GM maize (MON 87460) at the Agricultural Research Institute, Makutupora, Dodoma.

The WEMA project conducted training on stewardship and CFT compliance for the team, CFT operators and representatives of the Ministry of Science and Technology. The training was held at Sokoine University of Agriculture, Morogoro and the Makutupora CFT site, Dodoma from 19-23 July, 2016. The WEMA project is funded by the Bill & Melinda Gates Foundation, the Howard G. Buffett Foundation, and the United States Agency for International Development.

The aim of the training was to ensure that the team conducting the CFTs is fully conversant with regulatory compliance requirements. It was also aimed at equipping the team with the necessary skills to conduct the trials according to laid down scientific procedures.

## Good progress in adoption of GM crops in Africa amid challenges

Sub Saharan Africa (SSA) is making steady progress towards commercialisation of agricultural biotechnology products.

There are more countries in SSA conducting confined field trials [CFTs]. More encouraging is the increasing number of countries including Ethiopia that are reviewing their hitherto restrictive laws to more science-based, functional pieces of legislation.

'This is a good indicator of the desire of many countries in the region to adopt the technology,' said Dr Denis Kyetere, Executive Director, AATF, in his opening remarks at the Annual Review and Planning Meeting for Open Forum on Agricultural Biotechnology (OFAB) in Addis Ababa, Ethiopia from 7-10 June 2016. OFAB is funded by the Bill & Melinda Gates Foundation.

However, despite the good progress in adoption and review of laws governing adoption of GM crops, there are still many challenges to overcome. For, Kenya imposed a ban on importation of GM foods about 4 years ago. 'It needs to be



Dr Denis Kyetere, Executive Director, AATF and Dr Adugna Wakjira, Deputy Director General, Ethiopian Institute of Agricultural Research follow deliberations at the meeting

lifted to pave way for smooth adoption of GM products in Kenya. Uganda, despite having successfully completed CFTs on various crops is yet to enact a Biosafety Law, thus delaying commercial release of the GM crops,' stated Kyetere.

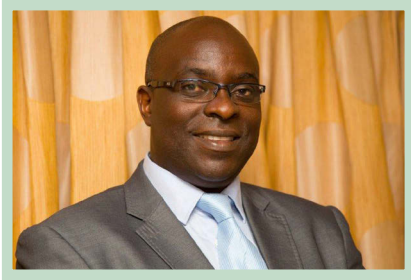
Dr Adugna Wakjira, Deputy Director General, Ethiopian Institute of Agricultural Research reiterated his Government's commitment to adopt biotechnology for agricultural development.

'Our government recognises biotechnology as one of the transformative tools to accelerate agricultural development and access to better seeds. This commitment is more exemplified by Parliament's amendment of the initial restrictive law to a more progress and permissive legislation on biotechnology.'

He appreciated the role OFAB is playing in raising awareness on biotechnology in Ethiopia.



## New staff



**Donald Mavindidze** joined AATF on 27 June, 2016 to head the newly created Directorate of Commercialization. Donald has a Master's degree in Business Leadership from the School of Business Leadership, University of South Africa, a Bachelor's degree in Agriculture from University of Zimbabwe, and a Diploma in Financial Management from the Association of Chartered Certified Accountants joins AATF. He joins AATF from Monsanto where he was the Country Manager for Zambia. He has over 18 years' experience in the seed sector covering countries in Central, Eastern and Southern Africa and will contribute to AATF's growth in its product deployment efforts.



**Issoufou Kollo Abdourhamane** joined AATF on 1 April as the Cowpea Project Manager, taking over from Dr. Prince Addae who retired from service. Based in Abuja, Nigeria, Issoufou will also provide oversight for other AATF activities in Nigeria. He holds of a Doctorate degree in Plant Pathology from Texas A&M University, USA; a Master's in Plant Pathology and Bachelors in Plant Protection from Purdue University, Indiana USA. Issoufou joins AATF from the West and Central African Council for Agricultural Research and Development (CORAF/WECARD) where he was the Coordinator for the Australian Agency for International Development (AusAID) Partnership.



**Ayodele Omowumi** joined AATF on 5 July, 2016 as the CAMAP Project Coordinator to be based in Kwara State, Nigeria. Omowumi has a Master's degree in Agricultural Extension and Rural Development from University of Ilorin, Nigeria; a Bachelor of Technology degree in Agriculture Economics and Extension from Federal University of Technology Akure, Ondo State Nigeria; and a Certificate in Agribusiness and Soil Conservation from University of Queensland, Brisbane, Australia. He joins AATF from the International Institute of Tropical Agriculture (IITA) Ibadan, Nigeria where he was the Coordinator for the Cassava Value Chain Enhancement project.



**Fredah Kathuure Nyaga** joined AATF on 18 April, 2016 as an Accountant. Fredah holds a Bachelor of Commerce Degree (Finance) from Catholic University of Eastern Africa and is a Certified Public Accountant (CPA-K). She joins AATF from Micro-Enterprise Support Program Trust where she was a Finance Officer.



**Alex Kimani Kariuki** joined AATF on 5 September as the Information Systems Officer. Alex has a Master of Business degree in Administration from University of Nairobi, a Bachelor of Science in Software Engineering from Kenyatta University and an advanced diploma in computer engineering. He is also a Microsoft Certified Professional, MSQL Server 2008 implementation specialist. He joins AATF from Population Services Kenya where he worked as a Systems Analyst/Developer.



**Samuel Oyuoki Angwenyi** joined AATF on 5 September as a Project Assistant – Deployment. Samuel has a Master of Science degree in Molecular Biology and Biotechnology from Sokoine University of Agriculture, Tanzania and a Bachelor of Science degree in Biotechnology from Kenyatta University. Samuel has worked as a Research Assistant with Beca- ILRI hub, and was also an intern at AATF. He joins AATF from Farm Inputs Promotions (FIPS) Africa where he was an Assistant Program Coordinator.

# Pictorial



Dr. Purnima Sharma (in blue), Managing Director, Biotech Consortium India Limited and Dr. Chaitali Bhattacharya, Scientist, Technology Development Board, Department of Science and Technology, Government of India when they visited AATF office in Nairobi. The two were part of India Prime Minister's delegation to Kenya in July 2016. They held discussions with AATF on capacity building, biosafety support services and biotech advocacy.



Ms Veronica Orio explaining the hybrid rice demo to farmers, journalists and other visitors during a field day at her farm Dakawa Ward, Mvomero District, Tanzania. The field day was held on 20 July 2016. It was attended by about 100 farmers.



The United States Agency for International Development (USAID) delegation (left) from the Kenya office and Washington DC when they paid a courtesy call to Dr Denis Kyetere, Executive Director, AATF (middle). They discussed various approaches of engaging regional bodies to facilitate cross-border technology transfer.



Ms Jovita Joachim, Project Officer, AATF shares publications on AATF projects and technologies at Nane Nane Agricultural Show that was held from 1-8 August 2016 in Mwanza, Tanzania.



Ms Fatuma Wario, Events Coordinator, AATF chats with visitor at the AATF booth during the Forum for Agricultural Research in Africa (FARA) - 7th Africa Agriculture Science Week held in Kigali, Rwanda from 13-16 June 2016.



Mr Abu Umaru (right), Communications Officer, AATF discusses with a cassava farmer during a field visit by Dr Claude Fauque (second left), Director, Global Cassava Partnership for the 21st Century (GCP21) to CAMAP farmer's field in Iwo, Osun State, Nigeria. Dr Fauque was accompanied by Mr. Fadele Abodunrin (second right), CAMAP field Officer, Osun and Engineer Kolawole Peter, Head of Mechanization, IITA and one of the agripreneurs attached to the IITA mechanization unit.