AATF

PROSPERITY THROUGH TECHNOLOGY

Annual Report 2023

# Efforts towards last mile delivery of agricultural technologies

*ACAT has clearly shown us that African agricultural landscape is ripe for transformation, and the seeds of innovation are ready to be sown. We must seize this moment, harness our resources, and channel our investments wisely to drive the innovation necessary for a prosperous agricultural sector in Africa. Let us foster an environment where the entrepreneurial spirit in agriculture can thrive.*

**– H.E Dr. Goodluck Jonathan,** *Former President, Federal Republic of Nigeria during the inaugural edition of ACAT.*

# Efforts towards last mile delivery of agricultural technologies

## Annual Report 2023

AATF
PROSPERITY THROUGH TECHNOLOGY

**Nairobi, Kenya**

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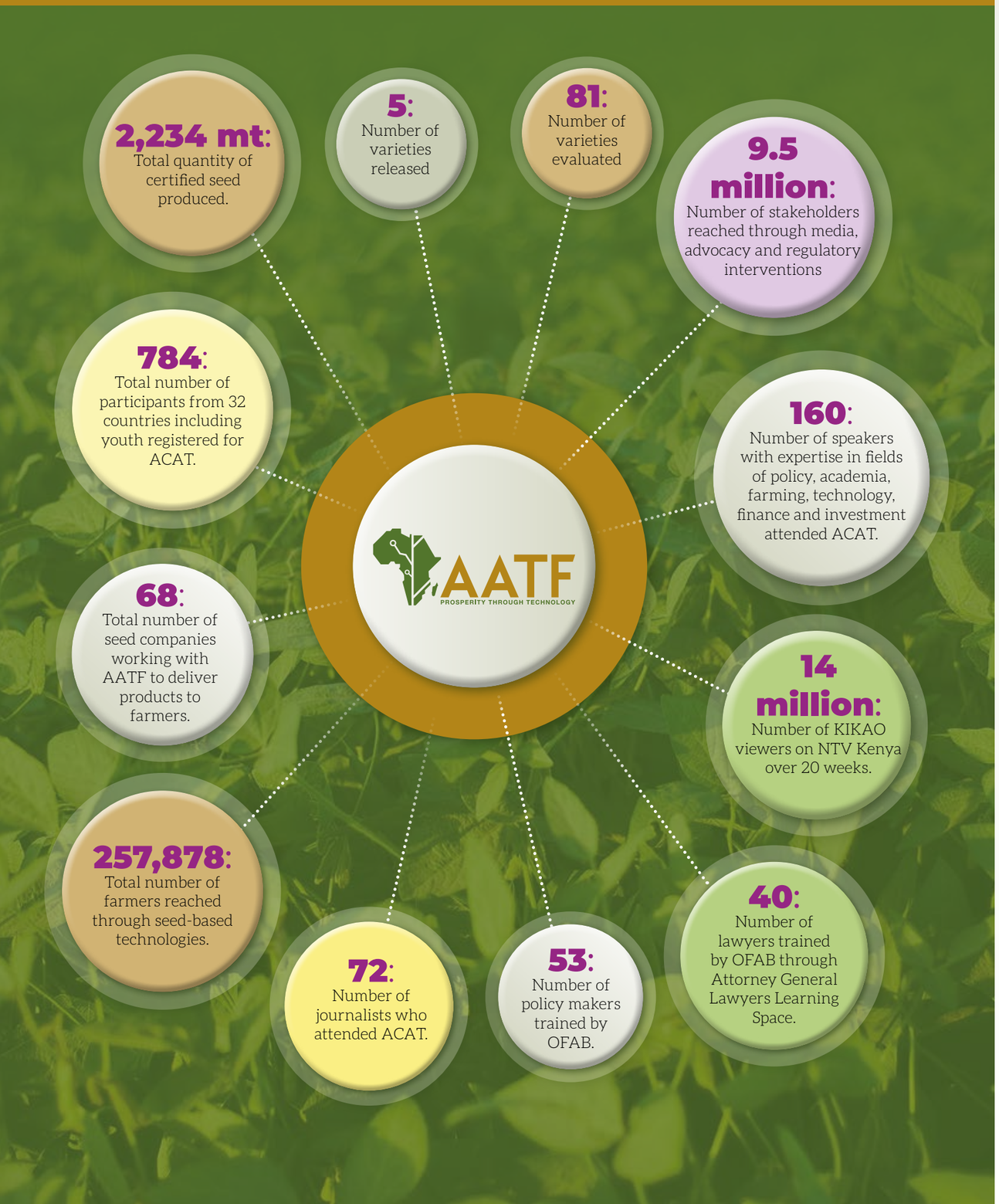



# List of abbreviations and acronyms

| | |
|---|---|
| ABNE | African Biosafety Network of Expertise |
| ACAT | African Conference on Agricultural Technology |
| ACIAR-SRA | Australian Centre for International Agricultural Research Small Research Activity |
| ADPs | Agricultural Development Programmes |
| AEFPF | African Emergency Food Production Facility |
| AfCTA | Africa Continental Free Trade Area |
| AfDB | African Development Bank |
| AHyRA | Alliance for Hybrid Rice in Africa |
| ARCN | Agricultural Research Council of Nigeria |
| AU | African Union |
| BMGF | Bill and Melinda Gates Foundation |
| CAADP | Comprehensive African Agricultural Development Programme |
| CBOs | Community-Based Organizations |
| CGA | Cereal Growers Association |
| COMESA | Common Market for Eastern and Southern Africa |
| COSTECH | Council for Science and Technology |
| CSA | Climate smart agriculture |
| CSIRO | Commonwealth for Scientific and Industrial Research Organisation |
| DRC | Democratic Republic of the Congo |
| EGS | Early generation seed |
| FANRPAN | Food, Agriculture and Natural Resources Policy Analysis Network |
| GAPs | Good agricultural practices |
| GCA | Global Centre on Adaptation |
| GMOs | Genetically Modified Organisms |
| IAR | Institute of Agricultural Research |
| IFRI | International Food policy Institute |
| IITA | International Institute of Tropical Agriculture |
| KEG | Kenya Editors Guild |
| KEPHIS | Kenya Plant Health Inspectorate Service |
| KMPDU | Kenya Medical Practitioners Pharmacists and Dentists Union |
| NAERLS | National Agricultural Extension Research and Liaison Service |
| NAFSIP | National Agriculture and Food Security Investment Plan |
| NAIP | National Agriculture Investment Plan |

| | |
|---|---|
| NBMA | National Biosafety Management Agency |
| OFAB | Open Forum for Agricultural Biotechnology |
| PBR | Pod-Borer Resistant |
| REA | European Research Executive Agency |
| RMCs | Regional Member Countries |
| SDATA | Strategic Dialogues on Agriculture Technology in Africa |
| SEEDAN | Seed Entrepreneurs Association of Nigeria |
| SMEs | African Small and Medium Enterprises |
| SSA | Sub-Saharan Africa |
| STI | Science, Technology and Innovation |
| TAAT | Technologies for African Agricultural Transformation |
| UNFCCC | United Nations Framework Convention in Climate Change |
| USAID | United States Agency for International Development |
| USDA | United States Department of Agriculture |
| WEMA | Water Efficient Maize for Africa |

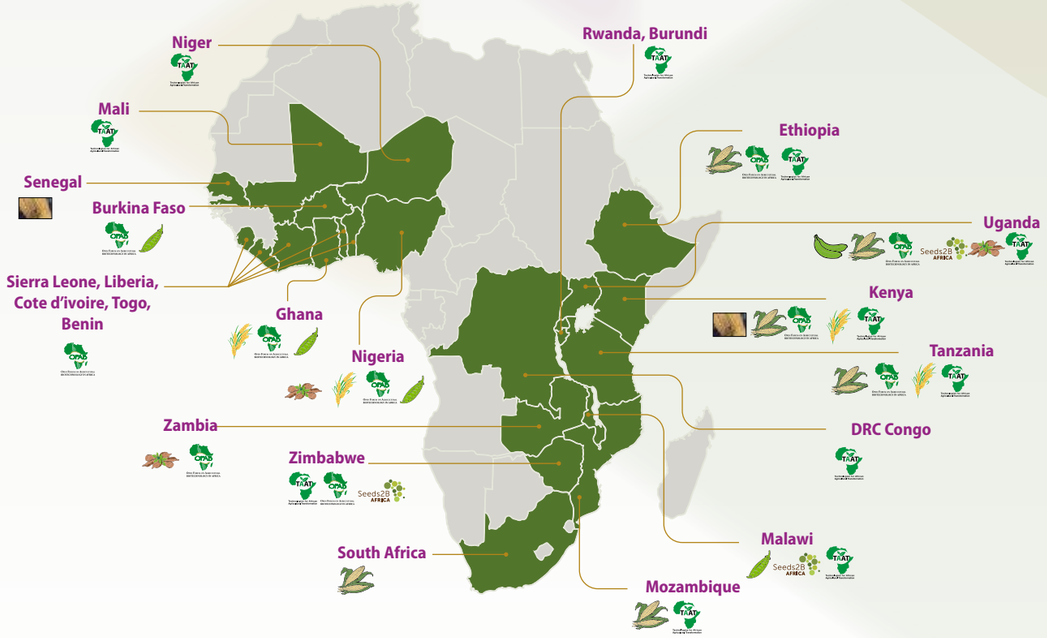
# Who we are

AATF provides farmers in Sub-Saharan Africa (SSA) with practical technology solutions to overcome farm productivity constraints. Founded in 2003, AATF is driven by the vision of a prosperous, resilient, food and nutrition-secure Africa, where smallholder farmers' livelihoods are transformed through agricultural innovations.

Active in 24 countries in East, Southern and West Africa, over the past two decades we have emerged as one of the continent's foremost technology transfer facilitators, trusted by both private and public sector institutions. We work beyond the product development segment to help commercialise and scale sustainable, demand-based technologies designed to address specific agricultural challenges. Active across the whole technology lifecycle, we positively transform farmers' livelihoods and lives. Above all, we believe in providing the 'freedom to innovate'. Believing that product development should co-evolve in step with regulation, we build alliances with other service providers to strengthen Africa's evolving regulatory systems.

Our proven expertise as a programmes and partnership facilitator, weaving together a broad range of actors for technology transfer, is unparalleled in Africa. Importantly, we have also become a policy advocate and reputable convener, promoting dialogue to catalyse functional markets, seed systems and enabling environments for technology testing, delivery and adoption.

For more information, visit: *https://www.aatf-africa.org*




*AATF projects' portfolio and footprint in Africa*

# Message from the Board Chairperson

**Aggrey Ambali**
*Chairperson, Board of Trustees*

> ***Adoption and use of new agricultural technologies and practices that respond to current and future needs of farmers is a key factor to improving agricultural performance. A way forward for Africa will therefore require advancing agricultural technology, utilizing innovative technologies, and exploring new opportunities.***

The high proportion of GDP accounted for by the agriculture sector in Africa essentially and inseparably implies that the quest for food and nutrition security must be intertwined and co-designed to simultaneously address the continent's economic growth and development towards a highly sustainable resilient food systems for its people. National development and implementation plans of African countries have thus been anchored on robust strategies and programs structured to support continental agricultural transformation. Key examples are the African Union's Science, Technology, and Innovation Strategy (STISA), the Malabo Declaration, and the Comprehensive African Agricultural Development Programme (CAADP). These strategies and programmes and many others across the continent were conceptualized to improve food and nutrition security for people in Africa. In the last few decades, the drive for the eradication of hunger and attainment of food sufficiency has been premised and hinged on the need to raptly grow and deploy science, technology, and innovation (STI) in the agriculture sector. The question is how well is Africa doing now with STI and what needs to be done to rapidly integrate this into the food security agenda? What should the post-STISA 2024 and post-Malabo agenda for Africa be addressing as these two come to conclusion end of 2024, and their decadal successors are being developed?

Undoubtedly, good progress has been made in recent years in some areas of the agriculture sector. Some countries and regions are faring better than others. While recognizing that some good milestones have been recorded in productivity statistics and nutrition indices on the continent, glaring gaps persist which underscore the point that more coordinated and well-orchestrated fit-for-purpose programmes would have to be initiated and delivered if Africa is to economically benefit from its agricultural endeavours in magnitudes and high impacts as obtainable in other parts of the globe. A key area of emphasis for further improvement is the integration and better utilisation of STI in agriculture as a game changer for driving transformation along commercial contexts.

In an exercise conducted by AUDA-NEPAD appraising the implementation of the Malabo Declaration, it was revealed that agriculture had not just only risen to the top of the political agenda in Africa, but also amongst its development/investor partners; and that 40 countries had signed to CAADP Compacts with two thirds of them having formulated National Agriculture Investment Plans (NAIPs) or National Agriculture and Food Security Investment Plan (NAFSIPs). In another positive dimension, an agriculture growth rate of six per cent was achieved, although it was not uniform across countries. A key outcome of the study, as noted by the African Union, was that the integration and adoption of technology resulted in significant positive change in agricultural performance and better socio-economic development in clear direction that supports efforts at addressing hunger and improving food security.

Africa still suffers challenges of declining fertile lands, climate change impact, environmental pollution, and biotic stress of noxious weeds and pests with severe consequences not just to our agricultural productivity but to over 65 percent of the continent's population that depends on agriculture for livelihood. Africa's majority farmers are smallholder producers on 33 million farms, which accounts for 70 percent of the total food supply (Africa Development Bank, 2022). Thus, small holder farmers would invariably be the target strategic focus and drivers in addressing food security and economic development if Africa must improve agricultural productivity and reduce poverty. This target group would, as part of the paradigm change towards agricultural transformation, need to increase the adoption and use of new agricultural technologies along with best practices that support improved agricultural performance. Increased investments in advancing home-grown agricultural technology, improved capacity in the utilization of innovative technologies, and expanding the value chains for new opportunity creations to enhance market prospects and access for farmers is therefore needed.

> **40** countries signed to CAADP Compacts with two thirds of them having formulated National Agriculture Investment Plans (NAIPs) or National Agriculture and Food Security Investment Plan (NAFSIPs)

Technology is a core business element of AATF's mission among other intervention pathways that offer farmers good leverage and an array of new opportunities to improve their productivity. Therefore, AATF, in partnership with farmers and other actors, have a big role to play in steering a vibrant, commercial, and modern agriculture sector. Through the mission of AATF and other similar minded organizations, the continent's technology portfolio has broadened offering benefits that include superior yields, durable improved resistance to pests and diseases, improved adaptation for climate tolerance, and relatively shorter maturity periods. These innovative and cutting-edge agricultural technologies have resulted from both conventional and biotechnological pipelines that explored some of the best modern scientific strategies that further underscores Africa's increased access to state-of the-art facilities and expertise of its scientific community. AATF is helping countries in their efforts to introduce and utilize transgenic technology targeting compelling traits that are helping to drive resilience for systems in Africa. It is also partnering with other organizations to support advancement of gene editing. Under its conventional crop product pipeline, it is also helping to empower farmers with hybrid technology for some of Africa's staples in efforts to steer productivity revolution. These innovative contributions are directly relevant and critical to improving the health and wealth of farming communities and by extent with better opportunity for the continent's economic fortunes.

However, technological development, adoption, and utilisation, are still hindered by several factors that basically require more attention of country and continental leadership. Most of the factors unfortunately combine to make the environment in Africa less conducive to technological innovations. Corrective actions will necessitate policy prescriptions of African leaders to effectively

stimulate partnerships for advancement and integration of technological interventions in Africa's agriculture. In this context, and as Africa's next agricultural framework is developed, there will be need to especially enhance efforts towards energizing the enabling environment for technology especially for last mile delivery for the benefit of farmers. Currently, technology delivery pathways in Africa are still windy, and are often characterized by twists and turns that undermine the ability of farmers and other actors including consumers from maximizing the benefits of the technologies in a timely manner. Leadership at high-level decision making and relevant government institutions on the continent will be crucial to addressing this bottleneck. Other key focus areas for attention will involve translating the technologies to the economic benefits of farmers, value chain actors and the countries meaning attention to in-country and cross-border trade opportunities and market expansion to make food and nutrition security regional and sub-regional concepts to maximize synergies and cooperation. These and many other related challenges have necessitated the need for creation of a special technology platform to address the broader dimensions of issues that are critical to link STI with economic advancement of the continent. AATF has been a champion in facilitating this platform, the African Conference on Agricultural Technology (ACAT).

The inaugural ACAT was co-organized by AATF and the Government of Kenya in 2023. The meeting successfully gave well guided focus and spotlight to STI, and trending scalable solutions. The event addressed major biases in technology use and access, and related policy decisions. The meeting fostered learning and sharing of experiences on agricultural biotechnology on the continent. Going forward, ACAT is anticipated to be a strong forum to galvanize momentum around trending technology issues for quick and firm decisions to guide Africa's position based on well elucidated dialogues.

I, on behalf of the Board of Trustees, commend AATF Management, staff, and partners, and investors for their enduring efforts towards fostering agricultural transformation in Africa through innovative agricultural technologies despite policy and regulatory challenges. Notable strides have been made in boosting the productivity of crucial staple crops like maize, rice, cassava and cowpea on the continent. Improved crop performance has been recorded during trials and significant farmer level impacts realized where products have been adopted, bringing substantial benefits to farmers.

For example, Sampea 20-T, a Pod Borer Resistant (PBR) cowpea variety developed for improved insect protection from *Maruca vitrata*, was released in Nigeria in 2021 and farmers are already planting it with yields higher by 75 per cent compared to conventional varieties. The TELA maize (biotech product) that is drought tolerant and insect protected against stemborer and fall army worm (FAW) is showing a yield advantage of 54 per cent over commercial checks. TELA maize is slated for release to farmers in Nigeria in 2024. During the past 10 years, AATF has coordinated the release of 129 DroughtTEGO of conventional drought tolerant maize hybrid varieties in many countries. Average yield of this variety in Kenya is 4.9 tons per hectare on farmers' fields compared to 3.2 tons with the best commercial check. These value-adding technologies need to be scaled out to reach more farmers facing similar challenges.

We must grow our farmers with enduring durable technologies to foster sustainable increased productivity for Africa's economic prosperity. Thank you for your continued commitment and support in service to our farmers.

**Prof. Aggrey Ambali**
*Chairperson, AATF Board of Trustees*

> ***"Africa's greatest chance at attaining inclusive growth and development is through a science-led industrialization that effectively utilizes the Continent's own scientific knowledge."***
>
> ***Ms Nardos Bekele-Thomas**, the Chief Executive Officer of AUDA-NEPAD- Statement from AATF-FARA joint press statement following signing of a MoU in 2023.*

# Message from the Executive Director

**Canisius Kanangire**
*AATF Executive Director*

> ***An exciting new development was the successful launch of the inaugural African Conference on Agricultural Technology (ACAT), co-hosted with the Government of Kenya and supported by various public and private partners.***

The year ended on a high note, with an excitingly reflective moment, as we marked AATF's 20th anniversary. It has been and continues to be a remarkable journey from the early stages of ideation and technology development through deployment and now into the commercialisation phase. The 20-year walk has seen great progress in valuable technology transfer into the hands of African farmers. Aside from getting the products to farmers, AATF and partners have made significant contribution in facilitating better understanding and new learnings around the formation and management of public-private partnerships in the agricultural sector. The experiences and processes of these partnerships have significantly shaped transformational changes in the innovative technology enabling environment from access, development, testing, stewardship, release to commercialization. We acknowledge the monumental contribution of our partners from the public and private sectors for sharing in our aspirations for the continent and also for their unwavering commitment to the well-being of Africa's smallholder farmers who for centuries have been the beacons of food and nutrition security for the continent.

In 2023, we transitioned into a new strategy that represents the next stage and scope of our evolutionary cycle in technology transfer, delivery and scaling. The implementation of our 2023-2027 Strategy, aptly tagged and summed as *"Scaling for Impact"*, commenced with greater focus on last mile delivery efforts towards getting technologies (including NextGen products) to farmers at scale. By the end of 2023 (year one of the strategy), we had reached 238,188 farmers through seed-based technologies, which was 79 per cent of the year's target, with over 9.5 million stakeholders also engaged through advocacy, outreach, and regulatory interventions.

An exciting accomplishment that capped the first implementing year of the strategy was the successful launch of the inaugural African Conference on Agricultural Technology (ACAT), co-hosted with the Government of Kenya and supported by various public and private partners. ACAT celebrated science, technology, and innovation (STI) in Africa's agriculture attracting well over 700 participants from 30 countries across the globe who shared their experiences under the conference theme *'Agricultural Resilience through Innovation'*. The rich programme included live demonstrations of technologies and showcasing of successful project interventions that provided and generated interest, new experiences and learning for participants. Special dialogue sessions including a ministerial roundtable provided opportunity for sector specific discussions involving farmers, researchers, academia, private sector and youth. ACAT has been designed to be Africa's foremost multi-stakeholder platform for technology transfer discussions, prime dialogues and decisions for the continent and will be held every two years.

Our work in technology empowerment of smallholder farmers across 24 African countries was internationally acclaimed as AATF was the joint recipient of the 2023 Al-Sumait Prize for African Development. The prestigious prize was jointly awarded to both AATF and Dr. Catherine Nakalembe, an expert in crop mapping and monitoring, and Director of the NASA Africa Harvest Programme at the University of Maryland, USA. The prize valued at $1 million, was instituted to honor individuals or institutions who have, through their work or research, made significant advances in the fields of food security, health, and education in Africa. We thank the Al-Sumait Prize Board of Trustees for this recognition as we commit to continue building strong foundations for the integration of novel technologies into Africa's agriculture.

## Diversifying agricultural technologies and expanding frontiers for Next-Gen products in Africa

Along with our partners, we have mainstreamed new value-adding technologies in the market in AATF target countries. In 2023, we facilitated the release of five additional new drought-tolerant maize hybrid varieties, bringing to 129 the total released to date since the inception of the Water Efficient Maize for Africa (WEMA) Project in 2008.

We maintained continuous positive engagements with governments towards building and effectively implementing enabling systems that are crucial to getting new technologies and products to farmers in a timely manner. We note that delays in decision making in some countries are denying farmers the opportunity to try out and utilise technologies resulting in drawbacks in research pipelines of more superior innovations. Our support to remedy this through our advocacy and outreach programmes will remain a priority in efforts to better support governments in streamlining these processes for better results.

In continuation of our efforts to provide farmers with more adapted crop varieties in their production zones, some of our best technologies have been introgressed into diverse genetic backgrounds in the target countries of our respective projects, specifically TELA maize in Nigeria, Ethiopia, and Mozambique; PBR cowpea in Nigeria, Ghana, and Burkina Faso; and hybrid rice in Côte d'Ivoire, Nigeria, and Senegal.

Two critical factors easily emerge as issues of huge interest in the discourse of African agriculture demographics: (1) the high proportion of women employed in the sector and (2) the future role of youth in repositioning the continent for improved food and nutrition security for its people given that Africa is currently having the youngest population in the world. It is therefore pertinent that technologies explored to transform agriculture, must essentially be gender sensitive to address the special needs of women and youth. In the same vein, we are promoting nutrition sensitive technologies to specifically target unique health challenges faced by these gender groups and children. Some studies and actions are ongoing to support the effective integration and mainstreaming of gender and nutrition outcomes across AATF.

## Accelerating commercialisation and scaling of agricultural technologies

AATF produced 2,234 metric tons (mt) of certified seed for DroughtTEGO, PBR cowpea and hybrid rice through our seed company partners and utilising our product promotion and commercialisation channels reached 238,188 farmers in six countries.

We have successfully continued to foster more strategic engagements with regional and country-specific partners towards an effective product delivery system and improved capabilities in seed

production. In efforts to give accelerate the commercialization process and to reach more farmers, we contributed to strengthening the capacity of seed companies and licensed an additional eight to commercialize and produce Early Generation Seed (EGS) for DroughtTEGO hybrids in Tanzania and PBR Cowpea in Nigeria. We presently have a total of 68 seed companies partnering with AATF to deliver innovative compelling products to farmers. Given the significant interest shown by farmers for our products, and the consequent increase in demand for seeds, urgent measures including off-season seed production are being supported to help licensed seed companies bridge the seed gap. We recognize that a well-coordinated response action will be central to closing this seed gap.

**5** additional new drought-tolerant maize hybrid varieties

## Promoting the creation of a functional enabling environment for uptake of agricultural technologies and efficient markets

High level engagements were held with various governments as part of AATF's advisory and technical support in building an enabling environment for agriculture technology.

With a view to improving the seed system in many countries, discussions to develop seed roadmaps were organised for Angola, Burundi, the Democratic Republic of the Congo (DRC), Kenya, Malawi, Sierra Leone, South Sudan, and Zimbabwe. Other discussions targeting improved enabling environment for testing, deployment and commercialization of bio-based technologies were held with Senegal, Ghana, Ivory Coast and Uganda. Engagements to promote biotechnology and biosafety were done with the governments of Burkina Faso, Ethiopia, Ghana, Kenya, Malawi, Mozambique, Nigeria, and Rwanda. Conversations on biotechnology included with professional associations, editors, parliamentarians, chief executive officers, the legal and medical fraternities and academia.

In partnership with the African Development Bank (AfDB) through Technologies for African Agricultural Transformation (TAAT), AATF addressed policy and institutional challenges affecting seed production and supply in fragile African countries. This was complemented by the organization of a capacity strengthening program on seed certification in Kenya for seed inspectors and analysts from eight African countries (Djibouti, Eritrea, Liberia, Mozambique, Sierra Leone, Somalia, South Sudan, and Zimbabwe).

***"We are working with our partners like AATF to raise agricultural productivity in Africa through research, technology development, and uptake by farmers."***

***Her Excellency Amb. Josefa Sacko,***
*The Commissioner for Agriculture, Rural Development, Blue Economy and Sustainable Environment.*
*Statement from AATF-AUC joint press statement following signing of a MoU in 2023.*

We continued our drive towards enhancing information sharing, communication and dialogues on biotechnology and innovative technologies especially through the KIKAO, OFAB and the newly launched ACAT platforms. In this endeavor, the annual OFAB Media Awards that recognises factual science reporting, was co-organized by AATF with the Government of Tanzania in Dar es Salaam during the year. We also contributed to conversations during high profile events whose objectives strongly aligned with our goals including the FARA science week, the Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN), Regional Climate Smart Policy Dialogue, and COP28 of the United Nations Framework Convention in Climate Change (UNFCCC).

During the year, we also strengthened our partnerships and collaboration with the African Union through the African Union Commission (AUC), African Union Development Agency- New Partnership for Africa's Development (AUDA-NEPAD), and African Biosafety Network of Expertise (ABNE) involving several engagements. This included the renewal of the MoU between AATF and the AU Commission as part of efforts towards adopting and reinforcing a regional approach to policy development including facilitating key biotechnology/biosafety frameworks crucial to the agricultural transformation process of Africa.

The diverse multilateral approaches adopted in the implementation of our activities have contributed good results and new heights to climb. These have been made possible by the combined efforts and support of our investors, partners, staff, and the board. I wish to extend special gratitude and appreciation to AATF's Board of Trustees, staff and our subsidiary organizations for their dedicated efforts during the year for the accomplishments recorded. I sincerely thank you for your continued support and look forward to a more fulfilling 2024 with renewed vigor, determination and optimism that truly reflects our unflinching resolve and unwavering commitment to the emergence of a prosperous, resilient, food and nutrition secure Africa.

**Dr. Canisius Kanangire**
*Executive Director*

**Strategic Objective 1:**

# Diversify agricultural technologies and expand frontiers for next-gen products in Africa

**AATF is contributing to reshaping Africa's agricultural growth and development through the transfer of innovative and appropriate agricultural technologies to improve food and nutrition security. By providing a diverse range of appropriate technologies to Africa's farmers, AATF and like-minded organizations and partners are striving to strengthen food system resilience for sustainable and profitable productivity. AATF believes that the intractable challenge of food and nutrition security in Africa requires a multi-dimensional approach that incorporates an array of technological interventions and applications contextualized around diverse agro-ecological conditions and farmers.**

Significant progress has been made towards technology diversification, exploring new traits or using the traits in new combination as Next-Gen products to improve resilience, durability and better crop performance.

During the year, the Pod-Borer Resistant (PBR) cowpea received partial environmental release approval for the 709 event (Cry1Ab gene) in Burkina Faso. This means that all the three project countries—Nigeria, Ghana, and Burkina Faso—have now granted environmental approval for the PBR cowpea.

In Nigeria, a second *Bt* gene, Cry2Ab, was granted environmental release by the National Biosafety Management Agency (NBMA). The Cry2Ab gene has been combined with Cry1Ab towards development of a second-generation product of PBR cowpea (PBR CowpeaXTRA) for durable resistance to the pod borer Maruca. In Ghana, the last set of PBR cowpea national performance trial preceding its commercial release was finalised with results presented to the National Variety Release Committee which has reviewed and recommended it to the National Seed Council for release. With this progress, the PBR Cowpea is getting closer to the farmer.

*A PBR cowpea farmer in Nigeria showcasing her harvest of the crop.*

Efforts towards development of genome edited *Striga* Smart Sorghum (SSS) resistant to *Striga* progressed as the material transfer agreement for the shipment of the SSS was obtained from Corteva. With the agreement, the partnership was able to secure an import permit from the Kenya Plant Health Inspectorate Service (KEPHIS). The seeds were imported and planted to facilitate field trials at Alupe in Western Kenya.

*Leaf damage on Bt vs. non-Bt hybrid in multilocation trial under natural stem borer and fall army worm infestation at the National Biotechnology Development Agency (NABDA), Abuja site, Nigeria, Oct 2023*

## New Products Released

The release of more varieties is crucial to creating multiple product options to address the diverse needs of farmers, especially for market niches and better agroecological adaptation for improved productivity. During the year, five new DroughtTEGO® hybrids were released by AATF, national agricultural research systems (NARS) and project partners. Four of the hybrids (WE2101, WE2106, WE3106, WE5117) are being commercialised in Zambia through two licensed seed companies while the fifth hybrid (WE3106) is being commercialised in Zimbabwe through one licensed seed company. The varieties have been registered in the Common Market for Eastern and Southern Africa (COMESA) catalogue to promote commercialisation and delivery within the zone. This brings to 129 drought-tolerant maize hybrid varieties released by AATF and partners since inception of the Water Efficient Maize for Africa (WEMA) project in 2008. Thus far, DroughtTEGO® or TEGO hybrids as they are commonly referred to, have been released in nine countries.

**129**

drought-tolerant maize hybrid varieties released by AATF and partners since the inception of the Water Efficient Maize for Africa (WEMA) Project in 2008.

## Promising products nearing commercial release

The AATF product development pipeline has advanced with several promising lines tested at the national performance trial stage which is the last step towards the commercial release of the best performing varieties. Several sets of trials (yield trials and NPT) were done to identify the best performing lines for release (Table 1).

***Table 1: Summary of product evaluation activities during the year***

| Products/ crops | AATF Project | Country | Number of NPT sites | Performance evaluation | Number of varieties |
|---|---|---|---|---|---|
| Maize | TELA | Nigeria | 23 | NPTs | 6 MON89034 hybrids |
| Maize | TELA | Mozambique | 5 | NPTs | 5 (MON810 hybrids) |
| Maize | TELA | Mozambique | | NPTs | 5 (MON810+ MON87460 hybrids) |
| Maize | TELA | Ethiopia | 9 | NPTs | 6 MON810 hybrids |
| Cowpea | PBR cowpea | Nigeria | | MLTs | 3 PBR cowpea (Cry1Ab) |
| Cowpea | PBR cowpea | Ghana | 100 | NPTs | 5 PBR cowpea (Cry2Ab) |
| Cowpea | PBR cowpea | Burkina Faso | 60 | NPTs | 2 PBR cowpea (709A) |
| Rice | Hybrid rice | Côte d'Ivoire, Nigeria, Senegal | | On-farm demos | 24 hybrid rice varieties |
| Rice | Hybrid rice | Nigeria | 23 | On-farm demos | 25 hybrid rice varieties |
| **Total** | | | 220 | | 81 varieties |

*Dr. Sylvester Oikeh, the TELA Project Manager at AATF (right) with Mr. Rodger Voorhies, the Vice President, Bill and Melinda Gates Foundation, comparing the performance of Bt-MON89064 at TELA multi-location at NABDA Abuja site, Nigeria, in November 2023.*





A total of 220 evaluation trials were conducted for maize (DroughtTEGO and TELA), PBR cowpea, and rice. Evaluation trials were completed for 81 top promising varieties for TELA maize in Nigeria, Ethiopia, and Mozambique; PBR cowpea in Nigeria, Ghana, and Burkina Faso; and hybrid rice in Côte d'Ivoire, Nigeria, and Senegal (Table 1). The high number of top performing genotypes is well in sync with plans to achieve broad diversification to address the wide array of needs for the users of our technologies across Africa.

**81** The number of varieties evaluated in 2023

**220** Number of evaluation trials carried out in 2023

Results from evaluation trials in Nigeria conducted across 23 multilocation sites showed that the top four TELA® *Bt* hybrids (WE2279B11, WE2259BII, WE2272BII, and WE8208BII), based on yield potential and the level of target pest infestation at the sites, had yields ranging from 2.8 to 10.4 tons/ha. In comparison, the popular commercial check (Ober Supper 13) had yields ranging from 2.1 to 7.5 tons/ha. Thus, the four TELA *Bt* hybrids had yield advantage of 33 to 39 per cent relative to the popular commercial check; and were recommended for variety release.

## Non-seed-based technologies

AATF has extensively explored genetics-based technologies to enhance productivity by improving farmers' access to quality seeds. Significant efforts have also been made to explore non-seed-based technologies to enhance farmers' capabilities, complementing the effective use of seed-based technologies. For PBR Cowpea seed production, AATF promoted the integration of digital software and tools for weather forecasting to guide the prediction of planting time.

Mechanization has also been integrated into cassava production through partnership with Agridrive Ltd, an AATF subsidiary. Farmers are realizing incomes through a Pyropower project that utilizes the cassava biomass excluding its storage root for renewable energy generation. The bundling of mechanization and good agronomic practices (including improved varieties, fertilizers etc.) has supported good plant vigor and high yields for farmers in the project.

AATF also initiated plans to introduce an advanced modern cassava processing machine to produce top-grade high cassava quality flour as its primary product. The machine also produces a secondary flour product processed from cassava peels that could be used for animal feeds. It does not require cassava peeling thus eliminating drudgery associated with this labor. The processing machine, through the efficient utilization of cassava peels also eliminates waste litters from cassava peels and associated fermentation that causes putrid smell within processing factories and farmlands when using old high-quality cassava flour (HQCF) processing technologies.

AATF strengthened the bioeconomy capacities of Uganda, Ghana, Côte d'Ivoire, and Senegal for various bio-based products (e.g., biochar, fish pellets) produced using different technologies (e.g., biorefineries, pyrolysis). Under the Bio4Africa project, several activities were undertaken to assess and diversify bio-based solutions, facilitating the adoption of environmentally friendly agricultural practices, including value chain development for these products in the respective countries.

# A FARMER SPEAKS

## From fields to fortune: new hybrid rice transforming the lives of farmers!

**Mr. Mutisya Kariuki**, a small-scale farmer from Nderwa village in Kirinyaga County, Kenya, has been a rice farmer for the last 20 years. During this period, Mutisya, just like other farmers in the area, relied on a traditional rice variety known as Pishori to feed his families. Mutisya says the highest number of bags he has ever harvested is 23 from his one-acre land, barely enough for family consumption to last them to the next harvest. But his fortunes changed when he shifted to planting hybrid varieties.

'I could not believe the difference,' Mutisya recalls. 'The hybrid rice variety produced twice as much as my traditional variety and was more resistant to drought and pests from the last planting season in August 2022.' He says he harvested a total of 46 bags from his one-acre piece of land, the same plot he used to get around 23 bags of Pishori variety. This translated to a total of 4,600kg. From the harvest, Mutisya sold all the 4,600kg, each at Ksh70, earning him approximately over Ksh320,000 ($ 2,406).

He used the proceeds to pay school fees for the whole year for his grade five daughter. In addition, he says that he was able to pay off his debts, save the balance, and provide a better life for his family. Mutisya said he also used the proceeds from the sale of the straws to buy a bicycle for his daughter's use to and from school. The success of this new hybrid variety not only transformed Mutisya's harvest, but also his life. Now, he is the village hybrid rice 'consultant' who provides insights to the local farmers on how to properly grow and manage the hybrid rice to ensure maximum yields.






*Dr. Slyvester Oikeh (left), the TELA Project Manager at AATF, standing on WE7210 plot while Mr. Pedro Chaúque (right), a plant breeder at IIAM, standing on WE5206DB plot, the two best TELA hybrids with stay-green characteristics preferred by crop-livestock farmers in Mozambique*

> ***Upscaling agricultural technologies is key to addressing farming challenges facing key staple crops in Africa including rice, cassava, and maize.***

***Prof. Cliff Dlamini,***
*Executive Director of CCARDESA. Statement from AATF-CCARDESA joint press statement following signing of a MoU in 2023.*

## Looking forward

In line with this strategic objective, AATF will continue with efforts to advance both biotech and conventional technologies tailored to meet the requirements of farmers in Africa. There has been intensification in the engagement of partners to diversify our technology portfolio using genome editing to create additional value and novel traits to complement traits developed through transgenic processes.

Furthermore, AATF is also focusing on technology streams that will diversify farmer income sources by leveraging bio-based technologies like bio-refineries and pyrolysis, that utilizes crop residue and farm waste such as cassava peels, rice husks, etc. Working with our partners, we will continue to strengthen and diversify Africa's technology pipelines to avail more opportunities to African farmers for agri-food system transformation.

Strategic Objective 2:

# Accelerate the commercialisation and scaling of agricultural technologies

**The uptake and adoption of agricultural technologies by farmers is a fundamental step to modernising Africa's agriculture to improve food and nutrition security on the continent and enhance livelihoods. Commercialisation and scaling of these technologies is equally critical to this process as it helps ensure farmers have unrestricted access to useful demand and market driven inputs to address user specific needs and challenges in diverse commodity value chains. AATF's Strategic objective two therefore seeks to ensure that farmers realise the full benefits of technologies through improved productivity from the cultivation of higher yielding and adaptable crop varieties and adoption of best agronomic practices.**

AATF's commercialisation processes explore diverse business approaches to deliver new conventional and biotechnology products to market. This strategic objective involves a chain of interconnected efforts and activities to deliver timely and efficient production of quality seed to meet farmers' needs. The commercialisation implementation process provides for the continuous testing, deployment and refinement of business models and cost-effective approaches to reach farmers with strong emphasis on women and youth. Commercialisation at AATF is centered on both seed-based (PBR cowpea, DroughtTEGO maize, TELA maize and hybrid rice) and non-seed-based technologies (mechanization of field production operations, agro-processing, and bio-product machinery). For AATF, successful commercialisation of technologies requires attention to seed production, product promotion and marketing, establishment of demonstration plots (demos), stewardship, market development, demand creation, awareness and knowledge dissemination, and development and testing of viable business models.

*Participants from various seed companies during a two-day training focused on shifting seed entrepreneurs from commercialization of open-pollinated varieties to maize hybrids. The training took place at Pandagric Farm, Nasarawa State, Nigeria, in October 2023.*


*Extension agents and maize grain producers during a regional training workshop on maize seed agronomy and quality standards to meet seed certification requirements. The regional training took place in Zimbabwe, in November 2023.*

## Fostering strategic engagements and partnerships for product delivery

Public private partnerships (PPP) are the cornerstone of AATF's commercialisation and scaling implementation. AATF enhanced its partnerships with key stakeholders and market players in the seed sector. This involves leveraging synergies at regional and country levels with seed associations and companies to bolster capabilities in seed production, product promotion, distribution, and dissemination.

Increasing the number of seed companies involved is critical to efforts directed at ramping up seed production to meet the high demand especially for newly released products. At the country level, four seed companies were licensed to commercialize and produce DroughtTEGO hybrids (two each in Tanzania and DRC). Another four seed companies were licensed to commercialise PBR cowpea in Nigeria, bringing the total number of licensed seed companies engaged in Nigeria to 12.

Farmer associations such as the Cereal Growers Association (CGA) in Kenya and community-based organizations (e.g. CardPerP) equally play a strategic role in efforts to support uptake and adoption of new products through the set-up of demos to complement field day events that create awareness and educate farmers on the products. Through these collaborations, AATF and partners established a total of 2,588 demonstration plots for various products including 1,006 plots for maize hybrids, 22 for hybrid rice, and 1,560 for PBR cowpea.

At the regional level, AATF entered into a collaboration agreement with Africa Rice Center (AfricaRice) to implement the RiceFinder project being supported by Bill and Melinda Gates Foundation (BMGF) to increase rice production and productivity in West Africa by availing some of its best lines which are being trialed to identify high-yielding, and market-preferred rice hybrid varieties in this sub-region.

## Farmer demos, awareness and education

Collaboration with seed companies and other value chain players to promote transgenic and conventional products and encourage their uptake and use resulted in AATF and its partners reaching 257,878 farmers through AATF interventions including seed-based technologies, demos, field days and trade fairs; with another 9.5 million stakeholders reached through media, advocacy, outreach and regulatory interventions.

The joint establishment of demonstration plots and organising field days played a key role in reaching these farmers. The 2,588 demonstration plots established in 2023 for maize hybrids, hybrid rice, and PBR cowpea served as venues for organizing 29 field days which were attended by over 3,000 farmers. The demonstrations helped to build farmer interest in adopting the new varieties.

**257,878**

Total number of farmers reached through seed-based technologies, demos, field days, and trade fairs.

Several of these demos were conducted in countries where the products are being deployed. For example, the maize hybrid (DroughtTEGO) demonstrations were staged in Nigeria's eight key maize growing states of Kano, Kaduna, Abuja, Benue, Jigawa, Katsina, Nasarawa, and Niger. A total of 791 farmers were engaged to host the demos that attracted 1,842 farmers (31 per cent females and 69 per cent males). The PBR cowpea demos were established in Nigeria (1,400), Ghana (100), and Burkina Faso (60) and were also used to organize farmer field days. Farmer-managed on-farm demonstrations were organised through the Alliance for Hybrid Rice in Africa (AHyRA), to showcase the yield and economic advantages of hybrid rice in Central and Western regions of Kenya and were used to also carry out the second season evaluations of the varieties.

*A farmer during maize hybrid demo sites and field days in Nigeria, 2023.*





## Catalysing production of quality certified seed

Through partner seed companies, AATF project partnerships were able to produce a total of 2,234 metric tons (mt) of certified seed sufficient to benefit 238,125 farmers in six countries (Table 1). The production includes 2,185mt of DroughtTEGO in Zambia, Uganda, Kenya, Tanzania, and Ethiopia (for 218,500 farmers, at the rate of 10 kgs of seeds per farmer); 36mt of *Bt* cowpea in Nigeria (for 18,000 farmers); and 13mt of hybrid rice in Kenya (for 1,625 farmers). The increasing momentum observed for hybrid rice has spurred more interest from seed companies. Two private seed companies have expressed interest in producing pre-commercial seeds of licensed hybrid rice.

**2,234mt**

Total number of metric tons of certified seeds produced in 2023

**238,125**

Approximate number of smallholder farmers who benefited from certified seeds produced in 2023

In order to intensify increased seed production to meet the growing demand for PBR cowpea in Nigeria, AATF made efforts to optimize planting windows and select best planting time for farmers in a process that integrates historical weather data and analytics in guiding sowing time.

## Strengthening capacity for technology delivery and agribusiness

The development of a viable seed system is dependent on the production of quality seed accomplished in a timely and efficient manner to meet farmer needs. This is therefore a critical element of the AATF commercialisation and scaling processes. The formal seed system is still emerging, and a gap analysis indicates a key action to rapidly speed its development is

***Table 1. Summary of certified seed produced and sold in 2023***

| Product | Project | Country | Qty of seed produced (tons) | Number of farmers benefited |
|---|---|---|---|---|
| DroughtTEGO | WEMA | Zambia | 1,100 | 110,000 |
| DroughtTEGO | WEMA | Uganda | 713 | 71,300 |
| DroughtTEGO | WEMA | Kenya | 335 | 33,500 |
| DroughtTEGO | WEMA | Tanzania | 33 | 3,300 |
| DroughtTEGO | WEMA | Ethiopia | 4 | 400 |
| Total WEMA | | | 2,185 | 218,500 |
| Sampea 20-T | PBR cowpea | Nigeria | 36 | 18,000 |
| Hybrid Rice | Hybrid rice | Kenya | 13 | 1,625 |
| **Grand total** | | | **2,234** | **238,125** |

through capacity strenghtening in all its stages and processes (technical and infrastructure in particular).

In support of the TELA maize seed production targets, trainings for seed companies were held in Nigeria and Ethiopia. In Nigeria, 26 representatives from partner seed companies were trained on hybrid maize seed production to strengthen the commercialisation of TELA® hybrid maize. This training was conducted as part of the partnership between AATF and the Seed Entrepreneurs Association of Nigeria (SEEDAN). The training encompassed capacity strenghtening in line maintenance, bulking and product stewardship. Similarly in Ethiopia, AATF facilitated training for eight companies on seed production techniques, stewardship, and licensing requirements for TELA products.

Training on good agricultural practices (GAP), climate-smart agriculture (CSA), and maize seed production was carried out in Malawi for extension officers, and in Angola for technical staff of the Cabinda Project through the AATF led TAAT Maize Compact. The TAAT Compact also contributed to the development of the seed system of Sierra Leone by developing the national seed roadmap in collaboration with local partners, with AATF providing guidance and technical expertise.

Under the Hybrid Rice Project, a special training for farmers on GAP for nursery establishment, transplanting and demo management was also carried out. AATF trained 19 demo supervisors

*Pfumvudza (Conservation agriculture) Training, in Domboshava, Zimbabwe, in November 2023.*

**2,588**

Total number of demonstration plots established in 2023

and coordinators from CGA. Similarly, capacity strengthening for PBR cowpea seed production in Nigeria was carried out for 44 technical staff from licensed seed companies. The training covered cowpea seed production techniques and agronomy.

A regional training was held in Zimbabwe for 59 seed sector technical officers and extensionists from Somalia, South Sudan, Mozambique, and Zimbabwe on maize seed agronomy and quality standards for seed certification. Extension agents were trained on maize agronomy, grain quality standards and marketing.

AATF undertook infrastructural capacity strengthening of key players along the commercialisation value chain through facility and equipment installation, upgrading and training. Adapted cold rooms and irrigation facilities were constructed for the Institute of Agricultural Research (IAR) and ECOBasic seed enterprises in Nigeria to increase their capacities for seed production. Additional four private small and medium seed companies were supported with irrigation facilities and mini cold rooms. The companies were selected based on their seed production performance. The IAR was supported to renovate its green house facility to allow for production and maintenance of the breeding materials throughout the year.

Through the Bio4Africa Project which is aimed at developing a bioeconomy in Africa, a training for start-up businesses was held for farmers and rural communities in Uganda, Ghana, Senegal, and Cote d'Ivoire. The goal was to replicate biobased solutions and support the growth of businesses in these countries. The focus was on training the businesses that will be supplying feedstocks, in addition to providing them with key entrepreneurship skills and knowledge.





*Extension agents and maize grain producers during a visit to a seed processing plant and warehouse, in Zimbabwe, in November 2023.*

## Product stewardship

Our product stewardship approach, which includes the preservation of product integrity and compliance monitoring, remains a cornerstone of AATF's product delivery models. These models are centered on ensuring farmer satisfaction and confidence in products coming out of our partnership projects by providing access to quality seeds and offering support in technology management for long-term sustainability. During the year, AATF successfully secured a service level agreement with ILRI-Bioscience for Africa Lab (BecA Lab) to provide third party trait purity testing services for small and medium enterprises (SMEs) seed companies which will be licensed to commercialize TELA maize hybrids in Kenya and Nigeria. This is to ensure good quality management systems for TELA maize which is at the product commercialization phase.

To assess farmer compliance with stewardship requirements contained in the technology user guide (TUG) and to track farmer feedback on the relevance of the PBR technology at farm level, monitoring was conducted by field extension workers under the coordination of the Ministry of Agriculture's National Agricultural Extension Research and Liaison Service (NAERLS) and Agricultural Development Programmes (ADPs) in various states in Nigeria where PBR cowpea was cultivated.

A stewardship appraisal was conducted to evaluate the performance of PBR cowpea three years after its release in Nigeria. Supported by the Australian Centre for International Agricultural Research Small Research Activity (ACIAR-SRA), the study was conducted in four representative agro-ecological zones, assessing environmental and health impacts, genetic purity of seeds, acceptance of the variety, and adoption of recommended cultivation practices. Results indicated the presence of genetically pure cowpea in farmers' fields without cross-contamination, lower pesticide residue on PBR-cowpea fields (well below European Union recommended rates) compared to non-PBR cowpea fields, and higher beneficial microbial activity in PBR cowpea fields. This study thus shows that the cultivation of PBR cowpea was highly beneficial to farmers.

## Socio economic impact

A socioeconomic impact study was conducted for TELA® *Bt* maize on the welfare of smallholder maize farmers in Limpopo and Mpumalanga provinces in South Africa, where TELA seed has been deployed and commercialised. Results showed a significant and positive effect on yield by 61 per cent and income by 33 per cent among adopting farmers compared to non-adopters. The study noted that the benefits could be even higher with increased awareness and education on the benefits of TELA® *Bt* seed technology among smallholder farmers.

# A FARMER SPEAKS

## PBR cowpea variety: a gold mine for farmers!

A trip to Sokoto State, northwest of Nigeria, where farmers have planted the Pod Borer Resistant (PBR) cowpea variety, shed more insight on how PBR cowpea variety farming is gradually becoming a gold mine for farmers. The farmers said they almost quit beans farming due to frustrations – their beans were destroyed on the field after more than 90 days of investment leading to a total waste following insect attacks. In Shagari Local Government, Idris Saminu, 47, said he had been farming beans for about 17 years, but he had never experienced a good yield until he planted the PBR beans variety.

Saminu, a father of four, said he had since enrolled his children in a public school within their local government using part of the proceeds after selling the beans he harvested. The farmer hinted that he would increase his farm size from the current five hectares to about ten hectares so that he can make money to complete building a house for the family. 'This new bean variety helped me very well. I have five hectares; I want to increase it to ten hectares by next year. If you look you will see that I have already started building my house gradually, I want to build a house where my family will live comfortably. 'My children are now going to school because I have started making money from beans farming unlike before where I would plant and insects would destroy them on the farm,".





*A miller displaying maize flour made from the DroughtTEGO maize variety in Nakuru, Kenya.*

**29** Total number of field days conducted during the period

## Looking forward

The priority and emphasis of the AATF current strategy is to efficiently and cost-effectively deliver at scale its innovative technologies into the hands of farmers for use to accelerate and improve food and nutrition security. Commercialisation and scaling are the key mechanisms to achieving this. AATF will be expanding and building new capacities to support the development of good business models including market development to strengthen value chains for target commodities. Additionally, we aim to build stronger working relationships with relevant stakeholders, actors and market players throughout the value chain to support the production of large volumes of seeds to meet farmer demand, while also enhancing and expanding output markets for the commercialised products. New technologies in the product pipeline which are at advanced stages of pre-commercial release testing will be expedited for release and deployment towards diversifying AATF technology portfolio in the field and creating more options for farmers.

***"Investment in Africa's agriculture has been on the rise over the years, but the food crisis continues to worsen. To unlock its food potential, there are key areas that Africa must invest in including the improved seed varieties that can respond to emerging challenges like climate change, diseases, and pests."***

***Mr. Enoch Chikava,***
*Director of Agricultural Delivery Systems at the Bill and Melinda Gates Foundation, during a KIKAO series focusing on investing in Africa's agriculture.*

Strategic Objective 3:

# Promote the creation of a functional enabling environment for increased uptake of agricultural technologies and efficient markets

**With the global food system under enormous stress from challenges such as those related to climate change, conflict and pressure from a growing population, there is no arguing the centrality of science, technology, and innovation (STI) in defining our path towards agricultural resilience and meaningful transformation. However, the slow emergence of functional enabling environments, specifically policies, regulatory institutions and efficient markets, continues to stalk agricultural innovation, delaying realisation of the benefits of science on food and nutrition security, livelihoods and economies.**

AATF, together with its partners, continues to work with governments and regional organisations on the continent towards putting in place enabling conditions for access and use of agricultural technologies by introducing, changing or implementing relevant policies and laws; increasing public awareness; and building people's confidence in the uptake and use of modern agricultural technologies. AATF adopts both country and regional approaches towards establishing the needed enabling environment for adoption of STI on the continent.

## Towards regional harmonisation of seed and fertilizer policies and regulations

Harmonisation of policies and regulations around seed systems and delivery of fertilizers and climate-resilient seeds continued to be a key focus area for the Technologies for African Agricultural Transformation (TAAT) Policy Enabler Compact, coordinated by AATF. Now in its second phase of implementation, the Compact continued engagements with Regional Economic Communities (RECs) while providing technical assistance to country governments in efforts towards the implementation of policy harmonization within the framework of the Comprehensive Africa Agricultural Development Programme (CAADP) commitments, and the agricultural pillar of the Africa Continental Free Trade Agreement (AfCFTA).

Technical assistance was provided to support the Regional Member Countries (RMCs) of the African Development Bank (AfDB) in the implementation of policy and institutional reforms to accelerate the delivery of fertilizers and climate-resilient seeds. Key areas of work for the Compact included: i) spearheading assessment of seed and fertilizer sub-sectors in target RMCs to characterize and prioritize gaps requiring urgent policy reforms; ii) offering technical assistance to selected RMCs in the development of seed roadmaps for priority commodities under African Emergency Food Production Facility (AEFPF), namely maize, wheat, rice and soybean; iii) providing technical support and expert advice to RMCs in the revision of policies and legislation aimed at reforming input subsidy programmes to align with private sector-led market dynamics; and iv) providing technical assistance to RMCs in support of domestication and implementation of regionally harmonized regulations for seeds, fertilizers and pest control products.

*Participants and representatives from FANRPAN, NCST, AATF and government officials from Malawi pose for a group photo during the national consultative workshop on trade and agricultural biotechnology.*

## Development of seed roadmaps

In-country meetings with governments of Angola, Burundi, Kenya, Malawi, South Sudan, and Zimbabwe were organized by the TAAT Policy Enabler Compact to foster a coordinated approach towards developing seed roadmaps for the timely production and delivery of certified seeds for priority crops such as maize, wheat, rice, and soybean. The consultations were carried out as part of AfDB financed AEFPF, established in 2022 in response to disruptions in global food supply chains caused by the Russia-Ukraine conflict. AEFPF aims to provide certified seeds, fertilizers, extension services, and post-harvest management technologies to 20 million farmers across 33 target countries.

Other stakeholder discussions were organized in Sierra Leone during the High-Level Seed Business Summit in Freetown that resulted in the development of a five-year Seed Roadmap for the country's key crops – cassava, rice, maize and soybean. The Seed Roadmap, aligned with Sierra Leone's national investment policies, plans and programmes, will serve as a key guide to attract investments in the country by ensuring attention to its urgent and prevailing agricultural sector needs.

Similar consultations were held with the government of the Democratic Republic of the Congo (DRC) in Kinshasa to provide technical assistance aimed at catalyzing the emergence of an enabling environment for the adoption and use of agricultural technologies by small-scale

farmers. The TAAT Policy Enabler will continue to collaborate with national stakeholders to speed up institutionalization of the draft seed law and other legal instruments that regulate the seed system to support agricultural transformation in the country.

## Capacity strengthening through training on seed certification

A benchmarking visit and training at the Kenya Plant Health Inspectorate Service (KEPHIS) was organised by the Compact for 16 seed inspectors and seed analysts from eight African countries including Djibouti, Eritrea, Liberia, Mozambique, Sierra Leone, Somalia, South Sudan, and Zimbabwe in June 2023. Participants engaged with the KEPHIS staff on seed certification experience at their state-of-the art seed testing facilities in Nakuru County, Kenya. The five-day training covered policies, laws and regulations at national and regional levels, seed production and processing, and quality assurance in seed certification.

## Creating an enabling environment for bioeconomy

Enabling policies are central to testing, deployment, and commercialisation of bio-based technologies and must be supported by enabling policies. Through the EU-supported Bio4Africa Project, policy dialogues were organised in May 2023 in Senegal, Ghana, Côte d'Ivoire and Uganda as part of efforts towards enhancing enabling policies for testing, deployment, and commercialisation of bio-based technologies. The dialogues focused on building consensus on country specific options that could facilitate the adoption of bio-based technologies and also to acquaint key policy makers and stakeholders with the Bio4Africa interventions. Communiques capturing the key deliberations, outcomes, and decisions of the policy dialogues were drafted for each country containing validated policy gaps hindering the development of a bioeconomy in each country with the associated recommended policy actions.

**53** Total number of policy makers trained by OFAB in 2023

*Seed inspectors and analysists from eight African countries during a training at KEPHIS seed testing facility in Nakuru County, Kenya.*

## High level engagements on biotechnology policy

The Open Forum on Agricultural Biotechnology (OFAB) project continued discussions with policy and decision makers across the political divide, journalists and farmer associations and the private sector to raise awareness on biotechnology and to move the discussions forward.

In Kenya, AATF engaged with the Senate, National Assembly and various ministries to discuss the state of agricultural biotechnology in the country and to seek ways to enhance people's understanding of the technology. Meetings were also held with professional bodies including the Law Society of Kenya and Kenya Medical

*A group of CEOs pose for a photo during the breakfast meeting in Kenya*

> ***"Promoting generation and uptake of Science, Technology, and Innovation (STI) to accelerate agricultural development in Africa, including diversification of agricultural technologies is crucial in enhancing farmers' livelihoods."***
>
> ***Dr. Yemi Akinbamijo**, former Executive Director, FARA. Statement from AATF-FARA joint press statement following signing of a MoU in 2023.*

Practitioners, Pharmacists and Dentists Union (KMPDU) to raise awareness on biotechnology in view of the cabinet decision to lift the ban on Genetically Modified Organisms (GMOs) in the country. In both Kenya and Rwanda, high-level meetings with 25 chief executive officers (CEOs) in the private and public sectors across the agricultural food value chain were held to raise awareness on the role of biotechnology in the economic growth of the countries. These meetings provided participants with the opportunity to gain insights on the safety and regulation of agricultural biotechnology, explore the scientific advancements and opportunities it presents throughout the agricultural value chain.

**220**

Total number of media practitioners trained by OFAB in 2023

OFAB also organized a consultative meeting with the Rwanda Agricultural Resources Board and Rwanda Environmental Management Agency to discuss the implementation of the National Biosafety Bill which was approved by the Cabinet of Rwanda in July 2023 and subsequently passed into law following parliamentary approval in August 2023. Stakeholders in Rwanda have recommended drafting regulation documents for ease of implementing the law.

## Biotech awareness, information, and knowledge sharing

The OFAB Project continued with its mission to influence change in attitudes and perceptions of biotechnology while supporting governments in formulating and implementing progressive regulations for the advancement of modern agricultural technologies and enhancing advocacy programmes for their increased uptake.


*Hon. Prof Adolf Mkenda, Ministry of Education, Science, Technology, and Innovation, United Republic of Tanzania, handing over a dummy cheque to Tinsae Habte Sibane, a TV journalist working for Ethiopian Broadcasting Corporation, who emerged the overall winner during OMAs 2023. Looking on is Dr. Canisius Kanangire (left), Executive Director, AATF; and Mr. Vitumbiko Chinoko (right), OFAB manager at AATF.*





*A March for Science* in support of the centrality of science in the national development agenda was held in Malawi in September 2023 and attended by over 133 stakeholders including farmers. The march aimed to advocate and campaign for the creation of an enabling environment for agricultural biotechnology in Africa. The event also celebrated 10 biotechnology champions across the continent for their contribution towards enhancing the understanding of biotech in their communities.

To sustain ongoing awareness efforts, AATF facilitated the formation of three new Africa wide networks with professional bodies for Journalists, Attorney General Lawyers', and Biosafety Regulators to widen the reach of biotechnology information.

Focus on science communication for effective and efficient management of myths and misinformation regarding

***"The global food system is facing major interconnected challenges which have been treated as separate concerns, yet they are deeply interconnected. Addressing these challenges will therefore require a transformative approach to policy to ensure sustainable and more equitable food and nutrition security."***

***Dr. Ousmane Badiane**, Executive Chairperson, AKADEMIYA2063, during a KIKAO series focusing on food systems, science and policy agenda.*

*Attorney General Lawyers from OFAB Countries and South Africa pose for a group photo during a learning space for the Lawyers to share experiences on GM litigation across OFAB countries*

**40**

The number of lawyers from OFAB chapter countries who attended the inaugural Attorney General Lawyers Learning Space training

agricultural biotechnology contributed immensely towards creating an enhanced perception for this group of technologies. OFAB proactively engaged with journalists and editors' associations to support factual information sharing on biotechnology. In Kenya, OFAB held discussions with 77 members of the Kenya Editors Guild (KEG) to establish a collaborative partnership to improve the environment for biotechnology in the country.

The recognition of exemplary biotech reporting by journalists was celebrated through the Africa-wide OFAB Media Awards. The 2023 edition was co-hosted by AATF and the Government of Tanzania through the Council for Science and Technology (COSTECH) in Dar es Salaam. The awards ceremony was attended by 41 journalists from 10 countries. Tinsae Habte Sibane, a TV journalist working for Ethiopian Broadcasting Corporation, emerged the overall winner. Andrew Viano, a radio journalist working for Zodiak Broadcasting Station in Malawi, was declared the winner under the radio category, while Lydia Ezit from Ghana, working for Graphic Communications Group Limited, was the winner in print and online category.

**700**

The number of participants who attended ACAT in 2023

## Capacity strengthening towards biotechnology understanding

As part of continuous learning to create better understanding of biotechnology, OFAB facilitated capacity strengthening workshops for 220 media practitioners, 53 policy makers and the political elite.

OFAB facilitated the first Attorney General Lawyers Learning Space, a platform where government lawyers gather to share experience on litigation cases involving GMOs and to familiarize themselves with international regulations governing biotechnology. The meeting took place in South Africa in March 2023 and was attended by 40 attorney general lawyers from OFAB chapter countries. During the meeting, the lawyers had a taste of GM products through an 'eating is believing' session, where they sampled foods made from GM crops such as maize.

**20**

The number of KIKAO episodes aired on NTV Kenya over 20 weeks in 2023

Working with the African Biosafety Network of Expertise (ABNE), OFAB hosted a retreat for 30 biosafety regulators from OFAB chapter countries in May 2023 in South Africa. The retreat sought to facilitate mutual learning and improve the implementation of national biosafety frameworks. During the retreat, the regulators established a coordination mechanism to enable ongoing knowledge sharing as they implement biosafety regulations.

OFAB facilitated 'seeing is believing' tours for four Burkina Faso (BF) policymakers to Nigeria to learn about the approval process and progress being made with *Bt* cowpea and *Bt* maize in the country. This was soon followed by the partial approval of *Bt* cowpea by the National Biosafety Authority (NBA), pending a socio-economic study and public participation in BF. In addition, the NBA renewed the application for cultivation of *Bt* cotton by Bayer, signaling the return of the technology to Burkinabe farmers.

A two-day Science Communication Capacity Strengthening Workshop was held in Dar es Salaam during the OFAB annual review and planning meeting and attended by 41 journalists from the 10 OFAB countries. The training focused on sharing experiences on science, technology, and innovation reporting in a world where the state of media is fast evolving.

## Dialogues and conversations

In 2023, AATF and the Government of Kenya successfully launched and hosted the inaugural African Conference on Agricultural Technology (ACAT) in Nairobi, which brought together over 700 participants from 30 countries across the globe to share their experiences in support of science and agriculture. The conference was held under the theme 'Agricultural Resilience through Innovation'. The event included exciting and innovative live demonstration of technologies. ACAT was highly supported by both the public and private sector.

In addition, five Strategic Dialogues on Agriculture Technology in Africa (SDATA) were held during the 2023 ACAT. The dialogues were separately organized for each of these groups: farmers, youth, researchers, private sector officials and ministers of agriculture across the region, attracting useful feedback, including the need to design and structure the dialogues for effective deliberations. This feedback will inform planning for the 2024 and 2025 SDATA meetings. AATF will host the researchers and

**154,000**

The number of KIKAO views on social media over 20 weeks beginning September 2023 – February 2024.

**16**

The number of seed inspectors and seed analysts trained by TAAT Policy in 2023

ministers' dialogues in the third quarter of 2024 which is designed to build strong momentum for ACAT 2025.

The KIKAO Show television broadcast that premiered on NTV Kenya in September 2023 aired a total of 20 episodes over a 20-week period. The episodes covered various topics relevant to STI with special focus on biotechnology. In addition to the television broadcast, the episodes were livestreamed on the NTV YouTube and website pages, as well as on AATF YouTube channel. The show gained significant traction reaching over 14 million viewers on TV and 154,000 views on social media. Positive consultations are ongoing with the Agricultural Research Council of Nigeria (ARCN) for repeat airing in Nigeria as we continue seeking funds to produce new episodes to cover full 24-week period.

The OFAB Project participated in 11 high-level events crucial to enriching positive dialogues and promoting agricultural biotechnology. In March, the project delivered a presentation at the Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN) Regional Climate Smart Policy Dialogue to raise awareness on the role of biotechnology in climate change adaptation and resilience building in Africa. In addition, in March 2023, OFAB presented a paper at the Malawi High-Level Conference on Industrialization, focusing on the role of Intellectual Property in Agricultural Biotechnology. OFAB also organized a side event at the FARA Science Week in Durban in June 2023, highlighting the role of biotechnology in supporting the implementation of the AfCTA through enhanced production and productivity. In December 2023, OFAB participated in COP28 of the United Nations Framework Convention in Climate Change (UNFCCC) held

## Building awareness and action for biotechnology and biosafety: The case of OFAB Ethiopia

More than a decade ago, there was no dedicated platform to communicate and share relevant and scientifically- accurate information on GMO technology in Ethiopia.

The Open Forum on Agricultural Biotechnology (OFAB), which was launched in 2006 identified this gap and called together in-country partners to launch the OFAB Ethiopia chapter in 2014.

OFAB Ethiopia soon became the perfect platform to promote discussions and build networks among the Ethiopian Biotechnology community. Through strong advocacy efforts from OFAB Ethiopia, regulators, lawyers, judges and even policy makers now had a platform to meet and discuss issues emanating around GMOs.

In the last decade, a key achievement for OFAB Ethiopia has been the facilitation for the review of Ethiopia's biosafety framework , and these initiatives birthed discussions which led to the policy amendment in 2015.

in Dubai, United Arab Emirates (UAE). OFAB participated in four side events involving different partners such as the Government of Tanzania, CARE USA, and Monash University of Australia. In the side events, AATF advocated for the role of biotechnology in climate action. AATF presented its experiences on using biotechnology to enhance climate adaptation through practical examples of projects such as the Water Efficient Maize for Africa (WEMA), TELA and PBR cowpea.

To effectively influence policy change in the countries where it operates in, OFAB is implementing a new initiative *'Agriculture Biotechnology Trade Policy'*. With funding support from the United States Department of Agriculture-Foreign Agricultural Service (USDA-FAS), the initiative seeks to support the development of an enabling environment for agricultural biotechnology trade in southern Africa. Under this initiative, OFAB is implementing activities in six additional countries, namely Zambia, Namibia, Botswana, Angola (all in southern Africa), DRC, and Madagascar in central and southeastern Africa, respectively.

### Looking forward

AATF will continue advocating for an enabling environment to support the uptake of agricultural biotechnology to enhance the livelihoods of African framers. To achieve this, AATF is committed to intensifying efforts to create awareness and engage in advocacy through capacity strengthening, information sharing and collaboration. Through these engagements, we aim to help shift attitudes and perceptions. We will support governments in the formulation and implementation of regulations that will guide the governance, release and registration of innovative technologies through the provision of technical support to relevant policy makers at national and regional levels. We will also enhance our advocacy work to expand the uptake of agricultural technologies across the continent, thereby creating a more receptive environment for the testing and adoption of biotechnologies. We will adopt an upstream and downstream approach for effective advocacy, employing strategies such as grassroot engagement and the use of high-caliber ambassadors.

## The African Conference on Agricultural Technologies (ACAT)

The first edition of the African Conference on Agricultural Technologies (ACAT) held from 30th October to 3rd November 2023 in Nairobi, Kenya on the theme ***'Agricultural Resilience through Innovation'*** was attended by over 700 people from various countries in and outside Africa.

ACAT was designed as a new, bold, and transformative conference to look at new technologies, ideas, and policies to future-proof African agriculture. Built in response to the need for high level discussions focused on agriculture technology, ACAT's purpose is to showcase emerging agricultural technologies and innovations, promote networking and shared learning, and unlock access to technology and its delivery to transform livelihoods in Africa.

ACAT aims to create a community of practice, highlight solutions, and provide a platform to attract investments for innovation and technology development while feeding into continental and global policy processes.

### ACAT in Numbers

- **785** participants including over 100 youth registered for the conference
- **32** countries were represented with Africa leading with 69%
- **160** speakers with expertise in fields of policy, academia, farming, technology, finance and investment.
- **13.6 million** Stakeholders reached through advocacy and outreach efforts

*H.E. Dr. Goodluck Jonathan, former President of the Federal Republic of Nigeria and the AATF Africa Ambassador for Agricultural Technology, and the Cabinet Secretary for Kenya's Ministry of Agriculture and Livestock Development, Hon. Mithika Linturi, admiring a product during the tour of the exhibition area at the inaugural ACAT meeting in Nairobi, Kenya.*

*CABI showcasing their drone technology to a section of participants during the live technology demo.*

Through a series of well-crafted interactive panel discussions, plenary sessions, policy dialogues and live demonstrations of scalable technologies, ACAT brings together experts, policymakers, practitioners, farmers, private sector players, and development partners in the agriculture sector from across the continent and beyond.

The 2023 ACAT was hosted by (AATF in conjunction with the Government of the Republic of Kenya through the Ministry of Agriculture and Livestock Department.

The Conference attracted over 700 participants from more than 30 countries who gathered in Nairobi, Kenya from 30th October to 3rd November 2023. It brought together a diverse group of practitioners, experts, donors, exhibitors, and othersinterested in adoptive technologies with the aim of transforming the agricultural sector

The ACAT 2023 theme was *'Agricultural Resilience through Innovation'* backed by a daily themed program focus that featured different sessions in a variety of formats. The daily themes were Food Security, Enabling Environment, Climate Smart Agriculture, Nutrition Sensitive Agriculture and Food Systems Development. The program included plenary sessions with world class experts, special focus technical interactive panel sessions, practical technology demonstrations, and peer/context specific dialogues as well as various informal networking opportunities where practitioners shared their experiences, ideas, new information and perspectives.

*Mr. Caleb Obunyali, Program Officer, AATF, interacting with a delegate at the AATF exhibition booth.*






*Hon. Kello Harsama, the Principal Secretary, State Department for Crop Development in Kenya, and Dr. Canisius Kanangire, Executive Director, AATF, during the press launch to officially announce ACAT in July 2023.*

The 10 live technology demonstrations (demos) showcased at ACAT 2023 provided an opportunity for attendees to interact directly with cutting-edge technologies and learn how they may be applied to their own work. Attendees got the opportunity to test and use an exciting and innovative array of technologies that are shaping the future of agriculture in Africa.

The over 30 exhibitions offered a central meeting and networking point within the conference and provided participants with the opportunity to interact with over 200 products and services.

The ACAT 2023 Exhibition categories included agricultural technology and innovation, crop, and livestock management, Agri processing, government and policy, research and development, agribusiness, financial and insurance services.


*The Cabinet Secretary for Kenya's Ministry of Agriculture and Livestock Development Hon Mithika Linturi handing over certificate of recognition to Joyce Seke Ampitan, an agricultural biotechnology champion from Nigeria during the inaugural ACAT held in November 2023 in Nairobi, Kenya.*

*H.E. Dr. Goodluck Jonathan, former President of the Federal Republic of Nigeria and the AATF Africa Ambassador for Agricultural Technology (L), Dr. Canisius Kanangire, Executive Director, AATF (C), and other guests make a toast during AATF 20th anniversary gala dinner.*

The ACAT 2023 IMPACT AWARD that recognized outstanding contribution to agriculture technology was launched. Those recognized included Dr Eugene Terry, Implementing Director, AATF; Professor Mohammad Faguji Ishiyaku, Plant Breeder/ BiotechnologyChampion; Joyce Seke Ampitan, Agricutural Biotechnology Champion -Nigeria; and Mahmoud Omari Masemo Bt Cotton Farmer Champion-Kenya.

ACAT was attended by a total of 72 journalists, including 10 international journalists from Kenya, Tanzania, Uganda, Ethiopia, Nigeria, Ghana, Burkina Faso, and Mozambique.

The ACAT Conference also celebrated AATF's 20th anniversary through a high-level dinner that marked two decades of the organization's existence and contributions towards promoting agricultural technologies in Africa. AATF used the opportunity to recognize and appreciate its partners, investors, stakeholders and African governments for their support towards advancing the agricultural sector in Africa for the good of the farmer.

*A section of ACAT participants during the AATF 20th anniversary gala dinner.*



# Cross-cutting priorities

AATF developed a series of cross-cutting priorities (CCPs) that underpin our new strategic framework and objectives. These are:

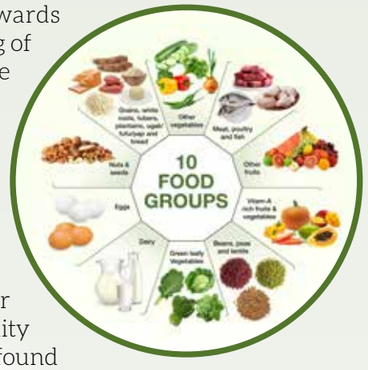
## Mainstreaming gender into AATF projects

AATF intensified its focus on contributing towards supporting women, men, youth, and the underprivileged persons to get equal access to technologies, products, and markets as a means of improving their livelihoods. The 2023-2027 strategy recognizes gender mainstreaming as one of four cross-cutting priorities (Climate Change, Nutrition, Gender, Data and Information Sharing) that will ensure that our interventions are fit for purpose and sensitive to current challenges. In 2023, a lean data study on Observer Farmers (OFs)—those who visit demonstration fields to learn—was conducted in Nigeria revealing the presence of gender disparities in decision-making processes regarding the adoption of PBR cowpea among farmers. It was observed that male OFs, at 95%, comprised a higher proportion compared to their female counterparts, at 75%, and were the final decision-makers in trying PBR cowpea. Despite these disparities, the report stated there was widespread adoption and positive reception of PBR cowpea among households, with high levels of satisfaction and perceived benefits attributed to its high yield and pest resistance. The study, conducted in collaboration with Tanager, aimed at understanding the experiences of both female and male OFs during their training sessions with demo farmers, particularly in planting and harvesting PBR cowpea. The study also sought to assess the impact on income, consumption, and household dynamics among OF households who planted PBR cowpea.

A key recommendation from the study is to strengthen outreach and educational programmes targeting female farmers to empower more women engaged in cowpea farming. This could entail organizing tailored training sessions and capacity-building programmes focused on PBR cowpea for female farmers.

## Nutrition integration into AATF projects

In line with the continental and international goals geared towards ending hunger, achieving food and nutrition security and promoting of sustainable agriculture, AATF has taken deliberate actions to improve uptake of nutritional sensitive interventions in the food system. Our nutrition integration approach is designed to promote the adoption and production of diverse and nutrient rich crops in Africa.




A 2023 formative study for cowpea farmers carried out in the three states of Adamawa, Kano, and Kwara in Nigeria to determine the nutrition behaviors of smallholder cowpea farmers indicates farmers are aware of foods considered to be nutritious and grown in their region but expenses on non-food items negatively affected their ability to purchase the often-expensive nutritious foods. The study also found that the main driver of cowpea consumption in the household is the nutritive value attached to it.

The study participants included producers, processors, Ministry of Agriculture and extension agents. These findings are being utilized to develop a social behaviour change communication strategy for cowpea farmers in the three states.

# Financial Report 2023

The financial report covers AATF audited annual financial statements for the period January to December 2023 and provides comparative data for the prior accounting period, 2022.

## Funding overview

The organization's funding for the year 2023 was provided by the United States Agency for International Development (USAID), Bill and Melinda Gates Foundation (BMGF), International Institute of Tropical Agriculture (IITA) as a Lead Grantee of the African Development Bank (AfDB), European Commission through the European Research Executive Agency (REA), Commonwealth for Scientific and Industrial Research Organisation (CSIRO) and Global Centre on Adaptation (GCA), Michigan States University, the Africa Rice Centre (AfricaRice) and International Food Policy Institute(IFRI).

Over the last five years, the major funding for AATF activities has come from private sources (foundations) who contributed 78% of the total grant income during the period. As a public charity, AATF has maintained its funding within the allowable threshold having received 33% of its total funds from public sources (government agencies, multilateral donors, and international institutions) over the five-year period. Below is the outlook of AATF's funding for the period 2019 to 2023.

## Source of funding: 2019-2023 (US$)

| | 2023 | 2022 | 2021 | 2020 | 2019 | Total |
|---|---|---|---|---|---|---|
| **Public funding** | | | | | | |
| Funding from government agencies | 2,028,113 | 2,387,516 | 3,410,556 | 4,655,846 | 6,057,928 | 18,539,959 |
| Funding from multilateral donors | 277,116 | 186,431 | 357,248 | 893,772 | 1,429,823 | 3,144,390 |
| Funding from international development organizations, non-profit organizations (NPOs) and public foundations | 329,101 | 444,287 | 127,168 | 129,843 | 223,137 | 1,253,536 |
| **Total funding from public sources** | **2,634,380** | **3,018,234** | **3,894,972** | **5,679,461** | **7,710,888** | **22,937,885** |
| **Private funding** | | | | | | |
| Funding from private foundations | 9,411,899 | 8,553,217 | 8,922,814 | 8,392,592 | 10,711,134 | 45,991,656 |
| Funding from other private institutions | – | – | – | –- | – | – |
| **Total funding from private foundations** | **9,411,899** | **8,553,217** | **8,922,814** | **8,392,592** | **10,711,134** | **45,991,656** |
| **Total funding** | **12,046,229** | **11,571,451** | **12,817,786** | **14,072,053** | **18,422,022** | **68,929,541** |

AATF is grateful to all its investors for their continued support to ensure that its commitment of assisting resource-constrained farmers in Sub-Saharan Africa (SSA) with technological solutions is achieved and hence a prosperous, resilient, food- and nutrition-secure Africa.

## Statement of financial position as at 31 December 2023 (US$)

| | 2023 | 2022 |
|---|---|---|
| **Assets** | | |
| **Non-current assets** | | |
| Property, plant and equipment | 163,110 | 230,089 |
| Right-of-use assets | 801,702 | 720,922 |
| Intangible assets | – | – |
| Investments in subsidiaries | 1,277,701 | 1,182,479 |
| Loans to group companies | 739,842 | 687,224 |
| | **2,982,355** | **2,820,715** |
| **Current assets** | | |
| Trade and other receivables | 1,293,457 | 1,234,255 |
| Contribution receivables | 1,669,901 | 329,694 |
| Cash and cash equivalent | 12,158,167 | 16,597,941 |
| | 15,121,525 | 18,161,891 |
| **Total assets** | **18,103,880** | **20,982,606** |
| | | |
| **Equity and liabilities** | | |
| Equity | 9,917,796 | 10,638,933 |
| Non-current liabilities | | |
| Lease liabilities | 832,470 | 770,209 |
| **Current liabilities** | | |
| Payables and accruals | 1,058,420 | 1,128,222 |
| Lease liabilities | 153,040 | 106,144 |
| Deferred income | 43,056 | 112,591 |
| Unexpended grants payable | 6,099,098 | 8,226,504 |
| | **7,353,614** | **9,573,461** |
| **Total equity and liabilities** | **18,103,880** | **20,982,603** |

## Statement of profit or loss and other comprehensive income for the year ended 31 December 2023: Abridged version (US$)

| | 2023 | 2022 |
|---|---|---|
| **Income** | | |
| Grant income | 12,046,229 | 11,571,451 |
| Other income and gains | 2,825,843 | 1,934,955 |
| Deferred income | 68,573 | 71,811 |
| | **14,940,645** | **13,578,217** |
| **Expenditure** | | |
| Project related expenses | 12,119,553 | 11,668,686 |
| Management and general expenses | 3,542,232 | 1,796,562 |
| | **15,661,785** | **13,465,248** |
| **Net Surplus/deficit for the period** | **(721,140)** | **112,969** |
| **Percentage of project related expenses operating expenses** | **77%** | **87%** |
| **Proportion of management and general expenses** | **23%** | **13%** |

## Statement of cash flows for the year ended 31 December 2023: Abridged version (US$)

| | 2023 | 2022 |
|---|---|---|
| Net cash provided by operating activities | (543,491) | 364,591 |
| Net cash (used in) investing activities | (415,753) | (279,259) |
| Net cash provided by financing activities | (3,480,530) | (2,529,979) |
| **Total cash & cash equivalents movement for the year** | **(4,439,774)** | **(2,444,647)** |
| Cash and cash equivalents at the beginning of the year | 16,597,941 | 19,042,589 |
| **Total cash and cash equivalents at end of the year** | **12,158,167** | **16,597,941** |





## Financial review

The organization recorded a net deficit of USD721,140 compared to a net surplus of USD112,969 in 2022. This represented a decrease of 738% from the net surplus of the prior year. The decrease was primarily due to decreased funding as some key projects like Hybrid Rice and GCA came to an end in 2022. Other project funding was received towards the end of the financial year 2023 e.g. TAATII and Michigan State University. Additionally, there was support of the Hybrid Rice Project activities from reserves. The inaugural ACAT conference was also supported through reserves.

There was an increase of USD474,769 in restricted income from USD11,571,460 in 2022 to USD12,046,229 in the reporting period, translating to an increase of 4.10%. Notably, this is attributed to funding from new donors (AfricaRice, IFRI, Bayer and Michigan State University) in 2023. Additionally, AATF received the Al-Sumait Prize award for African development of USD500,000 as a joint winner for empowering smallholder farmers with agricultural technologies.

AATF income recognition policy is based on matching principle, that is, income is recognized when expenses are incurred. Even though the net surplus decreased by 738%, the financial health of the organisation is sound. AATF continued with its prudent management of unrestricted (core) funds and enhanced project costing.

The organization revenue increased marginally by 10 per cent from USD13,578,217 in the prior year to USD14,940,645 for the year ended 31 December 2023. This was due to increased funds inflow from projects in terms of project expenditure and the resulting overhead. Additionally, other operating income, which was largely contributed by investments in fixed deposits, Al-Sumit Prize award and ACAT conference sponsorship and registration increased to USD1,507,229 from USD861,934 leading to a 74.86% rise as compared to the prior year.

Total organization expenditure recorded an increase of 16.3% (USD2,196,587) as compared to 2022. There were a few significant movements in some expense categories. The notable changes were increase in workshops, conference, and meeting expenses by USD527,566 (44.39%) and increase in travel expenses which rose by USD288,456 (45.81%). The increase in conference and travel expenses is a result of the inaugural ACAT conference held in November 2023.

AATF has a total cash and cash equivalent of USD 12,158,167 compared to USD 16,597,941 in the prior year.The future outlook of the organization is favourable with its main traditional donors continuing to support its initiatives. AATF has indications and opportunities of getting new funding from both the existing and potential new donors.


*AATF staff during the 2024 Annual Review and Planning Meeting (ARPM) at Tafaria Castle, Nyandarua County, Kenya.*

Board of Trustees 2023

# Board of Trustees

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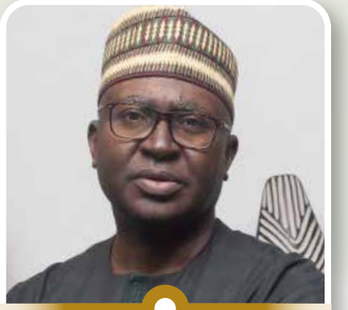

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**Sylvia Horemans**
Board Member

**Bonface Kaberia**
Kenya Government Representative

**Canisius Kanangire**
AATF Executive Director

# AATF Staff in 2023

| | Employee's Name | Position | Location |
|---|---|---|---|
| 1 | Abed Kagundu | Programme Officer - RegulatoryAffairs | Nairobi |
| 2 | Alex Abutu | Communications Officer - West & Central Africa | Nigeria |
| 3 | Alhaji Tejan-Cole | Legal Director | Nairobi |
| 4 | Amos Kiprotich Kimebur | Head of Finance | Nairobi |
| 5 | Bernard Ehirim | Programme Officer - Stewardship | Nigeria |
| 6 | Buke Fatuma Wario | Administrative Assistant/Events Coordinator | Nairobi |
| 7 | Caleb Obunyali Omwibali | Programme Officer - TELA | Nairobi |
| 8 | Canisius Kanangire | Executive Director | Nairobi |
| 9 | Caroline Kihara Thande | Adminstrative Assistant - TELA | Nairobi |
| 10 | Cecilia Limera | Programme Officer - Programme Development & Commercilization | Nairobi |
| 11 | Daniel Willy | Programme Officer - TAAT Policy | Nairobi |
| 12 | David Kipkosgei Tarus | Seeds2B Coordinator | Nairobi |
| 13 | Dorothy Onyango | Programme Officer - Rice Project | Nairobi |
| 14 | Emmanuel Okogbenin | Director of Programme Development & Commercilization | Nairobi |
| 15 | Erasmus Mwangi | Budgets & Grants Management Officer | Nairobi |
| 16 | Francis Nang'ayo | Senior Manager - Policy & Regulatory | Nairobi |
| 17 | Francis Nwankwo | Product Stewardship Manager | Nairobi |
| 18 | Fredah Nyaga | Finance and Procurement Officer | Nairobi |
| 19 | Gabriel Macharia | Data Management Officer | Nairobi |
| 20 | George Achia | Communications Officer - East & South Africa | Nairobi |
| 21 | George Marechera | Agribusiness Development Manager | Nairobi |
| 22 | Grace Mukasa | Resource Mobilisation Officer | Nairobi |
| 23 | Ijeoma Chinyire Akaogu | Program Officer - PBR Project | Nigeria |
| 24 | Jacquine Wambui Kinyua | Executive Officer | Nairobi |
| 25 | James Watiti | Regional Advocacy Coordinator | Nairobi |
| 26 | Jane Achando | Legal Officer | Nairobi |
| 27 | Jean Baptiste Tignegre | Project Manager - PBR Project | Nairobi |
| 28 | Joanne Muthie | Digital Communications Officer | Nairobi |
| 29 | Jonga Munyaradzi | Seed Production Manager | Nairobi |
| 30 | Josephine Mailu | Head of Human Resources | Nairobi |
| 31 | Joyce Njuguna | Monitoring , Evaluation, Accountability & Learning Officer | Nairobi |
| 32 | Kennedy Boiyo | Accountant | Nairobi |
| 33 | Kehinde Jimoh | Program Officer - Seed Systems & Agribusiness | Nigeria |
| 34 | Keziah Chomba | Legal Officer | Nairobi |
| 35 | Lilian Atieno | Operations Officer | Nairobi |
| 36 | Lilian Mahia | Finance & Procurement Assistant | Nairobi |
| 37 | Love Adegbola | Administrative Assistant - Abuja | Nigeria |
| 38 | Luiz Silva | Transgenic Seed Expert | Nairobi |
| 39 | Millicent Sedi | Program Officer - Agribusiness Development | Nairobi |
| 40 | Moses Taiwo | Program Officer - Seed Systems | Nigeria |
| 41 | Nancy Muchiri | Senior Manager -Communications & Partnerships | Nairobi |
| 42 | Paul Owolabi | Finance and Administrative Officer | Nigeria |
| 43 | Peter Mugambi | Director of Corporate Services | Nairobi |
| 44 | Sanni Kayode | Project Manager - Rice Project | Nairobi |
| 45 | Shehu Muhammad | Chief Agronomy | Nigeria |
| 46 | Simon Eze | Driver | Nigeria |
| 47 | Sofia Tesfazion | Director Resource Mobilization | Nairobi |
| 48 | Stephen Wafula | Driver | Nairobi |
| 49 | Sylvester Oikeh | Project Manager - TELA | Nairobi |
| 50 | Verenardo Meeme | Programme Officer - OFAB | Nairobi |
| 51 | Vitumbiko Chinoko | Project Manager - OFAB | Nairobi |

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AATF
PROSPERITY THROUGH TECHNOLOGY

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