

**CHARITY NUMBER: 1107507
COMPANY REGISTRATION NUMBER
04645806**

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
(A COMPANY LIMITED BY GUARANTEE)**

CONSOLIDATED REPORT AND FINANCIAL STATEMENTS

31 DECEMBER 2021

GLOSSARY OF TERMS

AATF	African Agricultural Technology Foundation
AHyRA	Alliance for Hybrid Rice in Africa
AfDB	Africa Development Bank
AGRA	Alliance for a Green Revolution in Africa
AIARC	Association of International Agricultural Research
AMELIA	AATF Monitoring, Evaluation, Learning and Improvement and Alignment
BBSRC	Biotechnology and Biological Sciences Research Council
BMGF	Bill and Melinda Gates Foundation
BSN	Bulked Siblings Nulls
Bt	Bacillus thuringiensis
BXW / BW	Banana Xanthomonas Wilt / Bacterial Wilt
CAMAP	Cassava Mechanisation and Agro-processing Project
CBA	Cost Benefit Analysis
CBOs	Community-Based Organisation
CFT	Confined Field Trial
CIAT	International Center for Tropical Agriculture
CIMMYT	International Maize and Wheat Improvement Center
CIP	International Potato Center
CIRAD	Centre de coopération Internationale en recherche
COMESA	Common Markets for Eastern and Southern Africa
CORAF	West and Central African Council for Agricultural Research and Development
COSTECH	Commission for Science and Technology
COVID	Coronavirus Disease
CRI	Crops Research Institute
CSA	Climate Smart Agriculture
CSIRO	Commonwealth Scientific and Industrial Research Organization
DDPSC	Donald Danforth Plant Science Center
DFID	UK Department for International Development
DTMA	Drought Tolerant Maize for Africa
DTMASS	Drought Tolerant Maize for Africa Seed Scaling
DUS	Distinctness, Uniformity and Stability
EAC	East African Community
ECOBASIC	ECOBASIC Seed Company Ltd
ECOWAS	Economic Community of West African
EFSE	Early Food Safety Evaluation
EGS	Early Generation Seed
EIAR	Ethiopian Institute of Agricultural Research
EU	European Union
FARA	Forum for Agricultural Research in Africa
FAW	Fall Army Worm
FOCAC	Forum for Chinese Africa Collaboration
FRC	Financial Reporting Council
FRS 102	Financial Reporting Standards 102
GATE	Ghana Agricultural Technology Evaluation
GBP	Great British Pound
GM/ GMO	Genetically Modified / Genetically Modified Organisms
HEAL	Hybrids East Africa Ltd
HTC	Hydrothermal Carbonisation
HQCF	High Quality Cassava Flavour
IAR	Institute for Agricultural Research
IFPRI	International Food Policy Research Institute
IFRS	International Financial Reporting Standards
IIAM	Instituto de InvestigaçãO Agrária de Moçambique
IITA	The International Institute of Tropical Agriculture
ILRI	International Livestock Research Institute

GLOSSARY OF TERMS (CONTINUED)

IP	Intellectual Property
IPM	Integrated Pest Management
IRRI	International Rice Research Institute
IRAD	Institute of Agricultural Research for Development
KALRO	Kenya Agricultural and Livestock Research Organisation
KES	Kenya Shillings
KEPHIS	Kenya Plant Health Inspectorate Service
LLP	Limited Liability Partnership
LPB	Legume Pod Borer
LUSIP	Lower Usuthu Smallholder Irrigation Project
MCMV	Maize Chlorotic Mottle Virus
MISS	Market Information Support System
MLN	Maize Leaf Lethal Necrosis
MNWAP	Mkondvo-Ngwavuma Water Augmentation Project
NaCRRRI	National Crops Resources Research Institute
NARO	National Agricultural Research Organisation
NARS	National Agricultural Research Systems
NaSARRI	National Semi-Arid Resources Research Institute
NASC	National Agricultural Seeds Council
NASECO	Nalweyo Seed Company Ltd
NBA	National Biosafety Authority
NBMA	National Biosafety Management Agency
NCRI	National Cereal Research Institute
NEPAD	New Partnership for Africa's Development
NERICA	New Rice for Africa
NEWEST	Nitrogen-Use Efficient, Water-Use Efficient and Salt Tolerant
NGO	Non-Governmental Organisation
NI	National Insurance
NPTC	National Performance Trial Committee
NSA	Nutrition Sensitive Agriculture
NUE	Nitrogen Use Efficient
NVRC	National Variety Release Committee
OFAB	Open Forum on Agricultural Biotechnology in Africa
OECD	Organisation for Economic Co-operation and Development
PASTTA	Partnerships for Seed Technology Transfer in Africa
PBR	Pod-borer Resistant
PLCAs	Product Launch Collaboration Agreements
PPPs	Public Private Partnerships
PVP	Plant Variety Protection
QBS	Qualibasic Seed
RECs	Regional Economic Communities
ROU	Right-of-use Asset
RSA	Republic of South Africa
SARI	Savannah Agricultural Research Institute
SFSA	Syngenta Foundation for Sustainable Agriculture
SGCF	Secondary Grade Cassava Flavour
SME	Small and Medium Enterprise
SNV	Stichting Nederlandse Vrijwilligers
SSA	Sub-Saharan Africa
SOPs	Standard Operating Procedures
SORP	Statement of Recommended Practice
spp	Species Plural
STMA	Stress Tolerant Maize for Africa
TAAT	Technologies for African Agricultural Transformation
TARI	Tanzania Agricultural Research Institute

GLOSSARY OF TERMS (CONTINUED)

TMC	TAAT Maize Compact
TUG	The Technology user Guide
US	United States
USAID	United States Agency for International Development
VAT	Value Added Tax
VCU	Value for Cultivation and Use
WACCI	West Africa Centre for Crop Improvement
WEMA	Water Efficient Maize for Africa
WP	Working Package
ZARI	Zambian Agricultural Research Institute
ZIM	Zimbabwe

CONTENTS	PAGE
Glossary of terms	1 -3
Trustees' annual report	5 -30
Strategic report	31-40
Trustees' responsibilities report	41
Independent auditor's report	42-45
Consolidated statement of financial activities	46
Consolidated balance sheet	47
Consolidated statement of cashflows	48
Notes to the financial statements	49-73

**TRUSTEES' ANNUAL REPORT
LEGAL AND ADMINISTRATIVE INFORMATION**

CHARITY NUMBER
1107507

COMPANY REGISTRATION NUMBER
04645806

REGISTERED OFFICE AND OPERATIONAL ADDRESS

African Agricultural Technology Foundation
C/O Arnold and Porter (UK) LLP, Level 30,
Tower 42, 25 Old Broad Street, EC2N 1HQ
London, United Kingdom

REGISTERED KENYA OFFICE ADDRESS:

ILRI Offices
Old Naivasha Road
P.O. Box 30709 – 00100
Nairobi

SUBSIDIARIES' OFFICE ADDRESSES

AgriDrive Nigeria Limited
Country of Incorporation: Nigeria
Company Registration Number: RC1474799
Registered Office Address: No 3, Idris Ibrahim Street, Jabi, Abuja, FCT
Head Office Address: No 1 J Allen Avenue, Bank Road,
J- Allen Bus Stop, Dugbe, Ibadan, Oyo State

Qualibasic Seed Company Limited
Country of Incorporation: Kenya
Company Registration Number: PVT/2016/031638
Eastgate Road, off Mombasa Road
P.O. Box 28897 - 00100
Nairobi, Kenya

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
LEGAL AND ADMINISTRATIVE INFORMATION (CONTINUED)**

AUDITOR

**Grant Thornton UK LLP
30 Finsbury Square
London EC2A 1AG**

SOLICITORS

**BDO Seidman, LLP
Accountants and Consultants
12505 Park Potomac Ave, Suite 700
Potomac, MD 20854, USA**

**Sandalwood Solicitors
Suite B20 Shakir Plaza
NO.3, Micheka Street
Off Ahmadu Bello Way
Area 11, Garki
Abuja-CFT, Nigeria**

**Arnold & Porter LLP
Tower 42
25 Old Broad Street
London, EC2N 1HQ
United Kingdom.**

BANKERS

**NCBA Kenya PLC,
Commercial Bank Building, Standard/Wabera Streets,
PO Box 30437-00100
Nairobi, Kenya**

AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021

TRUSTEES' ANNUAL REPORT (CONTINUED)
STRUCTURE, GOVERNANCE AND MANAGEMENT

BOARD OF TRUSTEES

Ousmane Badiane – Chair

Executive Chairperson & Managing Director
AKADEMIYA2063
Kigali, Rwanda

Jennifer Thompson - Board Chair Emeritus

Director - International Service for Acquisition of Agribiotech
Applications (ISAAA)
Ithaca, NY - USA

Shey Romanus Tata – Member

International Development Consultant
Silver Spring, USA

Bernard Slippers – Member

Professor, Department of Biochemistry, Genetics, and Microbiology
University of Pretoria
Pretoria, South Africa

Djime Adoum Djibrine - Member

High Representative
Coalition for the Sahel
Brussels, Belgium

Canisius Kanangire - Member

Executive Director
African Agricultural Technology Foundation (AATF)
Nairobi, Kenya

Jeremy Tinga Ouedraogo – Member (Retired on 10 Nov. 2021)

Head - NEPAD West Africa Regional Office
African Biosafety Network of Expertise (ABNE)
Dakar, Senegal

Jessica Colaco – Member (Retired on 10 Nov. 2021)

Co-founder & VP of Growth and Success
Brave Venture Labs
Nairobi, Kenya

Dahlia Garwe – Vice Chair

Chief Executive Officer (CEO)
Tobacco Research Board
Harare, Zimbabwe

George Sarpong – Member

Managing Partner
G. A. Sarpong & Co.
Accra, Ghana

Sylvia Horemans – Member

Chief Executive Officer
Kamano Seed
Lusaka, Zambia

Ingrid Wünnig Tschol – Member

Senior VP and Head of Health and Research
Robert Bosch Foundation - Gerlingen, Germany
Senior VP strategic Advise Science, Board Management

Aggrey Ambali – Member

Director - Industrialization, Science, Technology, and Innovation
(ISTI),
AUDA-NEPAD Agency
Midrand, South Africa
**Francis O. Owino- Member & Government Representative (Appointed
on 27 Jun 2022)**
Ag. Principal Secretary
State Department of Crops Development and Agricultural Research
Nairobi, Kenya

Dame Glover Lesly Anne– Vice Chair (Retired on 10 Nov. 2021)

Special Advisor to the Principal – Univ. of Strathclyde & President of
the Royal Society of Edinburgh
Glasgow, Scotland

**Hamadi Iddi Boga – Member & Government Representative (Retired
on 27 Jun 2022)**

Principal Secretary – Ministry of Agriculture
Nairobi, Kenya

EXECUTIVE LEADERSHIP TEAM (ELT)

Canisius Kanangire	Executive Director and Trustee
Emmanuel Okogbenin	Director Programme Development & Commercialisation
Alhaji Tejan-Cole	Director of Legal Affairs & Board Secretary
Sofia Tesfazion	Director of Resource Mobilisation
Peter Mugambi	Director of Corporate Services

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
STRUCTURE, GOVERNANCE AND MANAGEMENT (CONTINUED)**

The African Agricultural Technology Foundation (AATF) is a company limited by guarantee, not having a share capital and a registered charity governed by a memorandum and articles of association.

Article 8 of the Articles of Association deals with appointment of trustees. The trustees may appoint a person to be a trustee, either to fill a vacancy or as an additional trustee, for terms of a maximum of two terms of three years each (article 8.1 read with article 8.2). Article 8.2 shall not apply to the executive director or to the representative for the time being of the host country of the charity. The term of service of the ex-officio trustee being the representative of the host country of the charity shall be determined by its government. The name of host country's (Kenya) ex-officio trustee is Johnson Irungu Waitthaka.

In accordance with the AATF Articles of Association and Board Decisions, the board shall consist of not less than seven nor more than 12 trustees. Up to 10 trustees-at-large shall be drawn from academia, public sector organisations, international and local private sector companies, donor agencies, major non-governmental organisations, and the Consultative Group on International Agricultural Research community; the representative of the host country; and the executive director (ex officio).

The nominating committee, which is a standing committee advisory to the board, advises the board on the nomination of new trustees. The nominating committee maintains a data bank of potential candidates for future trusteeship and considers them several years in advance in order to maintain a balanced board in terms of the list of qualifications. The list of qualifications are; geographical distribution, field of expertise, gender, availability, language and suitability for board leadership and committee assignments.

The decision of the full board on the nominating committee advice is normally reached by consensus. In the absence of a consensus at a meeting of the board, the board chairperson may, and at the request of any two trustees not including the executive director or the representative of the host country, shall, put the proposal to a vote.

Trustees are elected for a term of no more than three years as determined by the board in advance of the election, with appointments staggered to ensure continuity. Trustees are eligible for re-election to a second term, also of three years, but shall not serve more than two successive terms. The host country government shall select its representative trustee and determine their term of office.

At the time an individual is invited to be a candidate for trusteeship, he or she is provided with information on board responsibilities and a sample schedule of meetings. In most cases the trustee nominee will be invited to attend a board meeting as an observer prior to election. Following election to the board, the new trustee receives a letter from the board chairperson welcoming him or her as well as background information from the board secretary, including the board manual with all annexes, minutes of the last two board meetings and the most recent AATF annual report. At the first board meeting, the new trustee attends, either as a trustee elect or observer, he or she also has an opportunity for briefings from the board chairperson, senior management, and programme staff. The senior management is responsible for arranging the orientation briefings.

Members of the board of trustees are required to be experts in relevant fields such as agricultural research or extension, agribusiness, marketing, biotechnology, intellectual property law, and biosafety. New trustees are inducted in the governing documents and policies of AATF. The board of trustees is occasionally trained on emerging governance and policy management issues. Whenever need arises, the trustees are also trained on resource mobilisation, and business negotiation skills among others. The Foundation is in the process of incorporating a trustees training policy into the existing Board of Trustees Manual to streamline the procedures and processes of training.

The general business of the charity is managed by the trustees who are charged with exercising all its powers. The trustees are specifically charged with expending the funds of the charity in such manner as they consider most beneficial for the achievement of the objectives, to invest in the name of the charity such part of the funds as they may deem fit, to direct the sale of any such investments, to expend the proceeds of any such sale in furtherance of the objects of the charity, and to enter into contracts on behalf of the charity. The trustees delegate the day-to-day management of the charity to the executive director.

The relationship between the charity and collaborative institutions is that of independent entities. Nothing in the charity's collaborative agreements shall be construed as constituting any collaborative institution to be the agent of another or shall be construed so as to constitute a legal partnership or joint venture of any kind between the collaborative institutions.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
OBJECTIVES AND ACTIVITIES**

Our Vision, Objectives, Aims, and Activities

The charity's vision is a prosperous and food-secure Africa. The charity's mandate is to transform livelihoods in Sub-Saharan Africa (SSA) through innovative agricultural technologies. The charity's specific objectives are:

- Diversify agricultural technologies accessed for use in SSA.
- Accelerate the commercialisation of agricultural technologies for improved farmers livelihoods.
- Create an enabling environment for increased uptake and use of agricultural technologies in SSA.

The charity achieves its specific objectives above by effecting the following implementation aims:

- Mainstreaming women and youth empowerment.
- A revamped partnerships approach taking lessons from ongoing relationships and the establishment of new networks, including critical new areas such as digital agriculture, and gender and youth.
- It is also:
 - Restructuring the organisation and re-aligning skills to respond to the dynamic environment;
 - Increasing and diversifying the funding base; and
 - Implementing a monitoring and evaluation system based on an effective knowledge management system.

AATF aims to ensure food security and reduce poverty in Africa. AATF is designed to facilitate public-private partnerships to access, develop, adapt, and deliver appropriate agricultural technologies for sustainable use by smallholder farmers in SSA through innovative partnerships and effective stewardship along the entire value chain. It provides expertise in the identification, access, development, delivery, and use of appropriate agricultural technologies. In its quest to ensure food security and reduce poverty in Africa, AATF draws upon the best practices and resources of both the public and private sectors. It also contributes to capacity building in Africa by engaging institutions on the continent in the diverse partnerships through which it executes its mandate.

AATF uses a medium to a long-term strategy to achieve its objectives. This strategy focuses on the access of appropriate technologies, developing and adopting them, and deploying and commercialising them for impact. These strategic focus areas are the key aspects (key performance parameters) to attaining the Foundation's objectives. We anchor our activities on a strong and effective institutional programming and a conducive environment through:

- Institutional capacity building for technology access, development, adaptation, and deployment; and
- Creation of an enabling environment for technology access, development, adaptation, and deployment.

To achieve AATF's vision of a "Prosperous and a Food-Secure Africa," we endeavour to:

1. Have AATF's footprint on as much of SSA as possible. To achieve this, AATF must spread its projects and activities throughout SSA beyond the current concentration in East Africa and parts of Southern and West Africa;
2. Broaden the range of technologies accessed beyond novel breeding techniques, including genetically modified technologies to encompass agro-processing (value addition), biological control, etc.;
3. Expand the donor portfolio - in all our current and planned activities; and
4. Work at ensuring exemplary relationship management of key stakeholders.

Guiding Principles

- AATF responds to a growing sense of urgency, demanding that agriculture plays a stronger role in Africa's economic development. The response includes the recognition that new approaches to technology development and delivery are required.
- AATF believes that if African agriculture is to provide secure livelihoods for farm households and contribute to economic growth then the private sector must play a much more important role in technology development for and delivery to smallholder farmers.
- This strong belief in the potential of the private sector is combined with a commitment to re-invigorate public sector roles in African agriculture, ensuring that public institutions support both markets and policies for equitable development.

AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021

TRUSTEES' ANNUAL REPORT (CONTINUED)
OBJECTIVES AND ACTIVITIES (CONTINUED)

- AATF focuses its attention on proprietary/innovative technologies because much of it is currently unavailable to African farmers. Because such technologies encourage commercial activity, they can bring new energy to African agriculture; their importance lie in the incentives they provide for the delivery of a product.
- AATF is committed to the adoption of new technologies and to facilitating the process by intervening to mitigate risks and ensure that they are deployed and used appropriately.
- AATF is committed to fostering partnerships that are based on real incentives, including the desire of emerging African enterprises to grow and prosper; the interest of farmers in acquiring the most productive technologies to improve their food security and incomes; and the commitment of donors and governments to support farm households with insufficient resources to build their assets and experience in order to prosper.

Core Values

As pioneers in brokering innovative agricultural technologies for farmers, and in particular resource-poor smallholder farmers in SSA, AATF staff uphold the following core values: Integrity, Dedication and Accessibility (IDA).

Integrity: We uphold integrity, we keep our word and do what we say we will do by when/how. We adhere to moral principles in dealing with ourselves and partners. We seek to be honest, transparent, and accountable. In recognition of our facilitative role, we provide accurate information to our partners while respecting confidences. We also base our actions on facts and present accurate reports of our progress, thus showing credibility and thriving to become the partner of choice for stakeholders in the agricultural sector.

Dedication: We are responsible partners, committed to ensuring our intended beneficiaries are well served. We seek to maintain good relations with our partners, investors, staff, and other stakeholders to ensure we maximise their potential for delivering public goods. We undertake to seek required resources to ensure the success of accessing and delivering required technologies.

Accessibility: We are available and approachable to discuss and/or provide information that will support technology transfer in SSA. AATF has specialised expertise to address niche issues related to technology transfer such as technology stewardship, partnership management, regulatory compliance, and intellectual property management. In recognition of the capabilities and contribution of the various entities involved in overall agricultural revival for SSA, AATF will avail its knowledge and provide necessary information in discussions and in requests for information to support best decisions and inform opinion on the issues at hand. We respect our stakeholders' opinion and seek to learn from their experiences.

The significant activities that contribute to the achievement of the above objectives are as follows:

- Developing *Maruca*-resistant cowpea varieties for use by smallholder farmers
- Initiating commercialisation of transgenic drought-tolerant and insect-protected maize varieties to enhance food security in SSA through the TELA Project
- Developing Nitrogen-Use Efficient, Water-Use Efficient, and Salt Tolerant (NEWEST) rice varieties
- Developing Hybrid Rice for use by smallholder farmers
- Improving cassava productivity through mechanisation and agro-processing
- Supporting deployment of simple, small-scale, and robust biobased technologies through the EU Bio4Africa Project
- Technologies for African Agricultural Transformation (TAAT) – Maize Compact
- Technologies for African Agricultural Transformation (TAAT) – Policy Enabler
- Enhancing access to improved and affordable seeds through the Seeds2B/PASTTA project
- Vegetable sector assessment towards enhanced climate resilience in the vegetable value chain in Eswatini
- Gender and youth empowerment
- Integration of Nutrition-Sensitive Agriculture for realisation of a holistic food security approach
- Building education and awareness to support decision making on biotechnology through the Open Forum for Agricultural Biotechnology (OFAB)
- Building availability to quality foundation and certified seed through Qualibasic Seed (QBS) and ECOBasic Seed Company Ltd (ECOBasic)

AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021

TRUSTEES' ANNUAL REPORT (CONTINUED)
OBJECTIVES AND ACTIVITIES (CONTINUED)

DEVELOPING *MARUCA*-RESISTANT COWPEA VARIETIES FOR USE BY SMALLHOLDER FARMERS

The Problem

Cowpea is an important food and nutrition security crop for more than 200 million people in SSA. Its production and productivity are constrained by several biotic and abiotic factors. Prominently among the biotic factors, is the *Maruca vitrata* commonly known as Legume Pod Borer (LPB) which can cause yield loss of about 80 per cent of the production depending on the level of infestation and prevailing climatic conditions. To control the insect pest, farmers used to spray pesticides up to 6 -10 times within a cropping season- multiple applications of pesticides are not only expensive but also detrimental to the farmers' health and environment. To address this problem, scientists developed a genetically modified (GM)/transgenic cowpea variety that can confer resistance through the expression of the Cry1Ab protein from *Bacillus thuringiensis* (Bt) against lepidopteran insects but more specific to the LPB. This is a laudable achievement because there is no source of resistance in the cowpea gene pool. Development of varieties which confer resistance to LPB through conventional breeding has not been successful, hence the heavy reliance on chemical insecticides which are highly detrimental to the environment and health of the farmers. The PBR cowpea is therefore, addressing the problem of the LPB (*M. vitrata*), a lepidopteran pest that inflicts severe damage to cowpea.

Objective

The project aims at contributing to food security and improving the livelihoods of smallholder farmers in SSA by developing and deploying improved, high-yielding farmer-preferred cowpea varieties that are resistant to the insect pest *Maruca vitrata*, commonly known as LPB.

AATF Intervention

The PBR Cowpea Project is a public-private partnership (PPP) which started in 2009 working towards development, deregulation and commercialisation of high yielding cowpea varieties that are resistant to *Maruca vitrata*, through a combination of conventional breeding and genetic engineering of the crop to improve its productivity and utilisation.

AATF works in partnership with international institutions such as Commonwealth Scientific and Industrial Research Organization (CSIRO) Australia, Donald Danforth Plant Science Center (DDPSC) Missouri, Michigan State University USA, and several National Agricultural Research Systems (NARS) in Nigeria, Ghana, and Burkina Faso. AATF obtained the technology on a royalty-free basis from Bayer. AATF contributes its expertise in PPP, intellectual property and project management, product stewardship, and regulatory affairs. CSIRO-Australia provided the gene construct and assisted with the genetic transformation of IT86D10-10 cowpea variety while DDPSC provided the regulatory science towards dossier compilation for submission in the project countries.

Summary of Project Achievements

The first set of Pod Borer Resistant (PBR) cowpea varieties developed in the project had only one gene for resistance. Given the need to strengthen the durability of cowpea resistance to *Maruca vitrata*, the project developed new PBR lines carrying a second gene for resistance. Efficacy trials for the second gene have been completed. While transformation with both genes (Cry1Ab + Cry2Ab) through a molecular stack is still being optimised, efforts through a breeding stack using marker-assisted backcrossing are ongoing in Nigeria and Ghana. Regulatory trials for the second gene were conducted in Nigeria, Ghana, and Burkina Faso. Data generated from the regulatory trials are being used to compile the dossier which will be submitted to regulatory authorities towards environmental release in the three project countries.

The project has also made advances in the development of the regulatory dossiers for the release of the transgenic PBR cowpea in Ghana. The dossier has been submitted to the National Biosafety Authority (NBA) Ghana and is awaiting review and decision-making by the Ghanaian authorities. This process had been affected by the delayed appointment of the NBA Board of Trustees by the President of Ghana. However, the board was appointed and inaugurated in December 2021 and the review was kickstarted.

PBR cowpea (SAMPEA 20-T) was successfully launched in Nigeria for upscaling to farmers. Three private seed companies (Maina Seed Ltd, Tecni Seed Ltd, and Goldagric Nig Ltd) were licensed by AATF to produce PBR Cowpea certified seeds in the country. A total of 7,000kg of PBR Cowpea certified seeds were produced during the 2020 wet and 2021 dry seasons to prime the pipeline during the commercialisation process. These seeds were sold by the licensed seed companies directly to farmers within 10 days after the product launch, who in turn planted them in at least 10 states of the country. The PBR Cowpea logo and seed pack design was also finalised.

AATF signed a contract with the Institute of Agricultural Research (IAR) Seed Unit in 2021 to produce both breeder and foundation seed for the licensed seed companies to use in certified seed production. A total of 144kg of breeder and 2,300kg of foundation seed was

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
OBJECTIVES AND ACTIVITIES (CONTINUED)**

produced during the 2021 wet season. During the 2021 cropping season, 80kg of foundation seed was allocated to each of the three licensed seed companies to produce the certified seeds. The seed companies produced 1,970kg of certified seed. Seed production was greatly constrained by early cessation of rainfall, mid-season drought, and banditry attack in some parts of the country. The project through the licensed seed companies embarked on dry season production to cushion the effect of low output experienced during the wet season. Seed production to augment the shortfall in the 2021 wet season production will be done during the 2022 dry season.

Eight hundred and twenty-four (824) demonstration plots of PBR Cowpea were successfully established by smallholder farmers across the 36 states of Nigeria including the Federal Capital Territory. This was done to create awareness and demand for the product by farmers in line with the commercialisation and upscaling of the first PBR Cowpea product released as SAMPEA 20-T in Nigeria, which is one of the focus areas of the project's new phase.

As part of product stewardship in 2021, the project collaborated with the National Agricultural Seeds Council (NASC) to successfully implement the use of seed codex on all PBR Cowpea seed packs as an effective anticounterfeiting measure to protect farmers from buying fake seeds. To ensure the integrity of the product and availability of quality seeds, the project also collaborated with NASC molecular laboratory to carry out the genetic trait purity of the breeder, foundation and certified seeds produced in 2021. To prevent transboundary movement of PBR cowpea seed into countries where it has not been deregulated, every seed pack has information indicating that it is meant for sale and use only in the Federal Republic of Nigeria where it has been deregulated. The SAMAWATI app was developed in collaboration with a third party and implemented for real time field reporting of incidents and field record keeping by stakeholders. The Technology user Guide (TUG) was finalised and approved for deployment in 2022.

Expected Impact

- i) The strategy for the year 2020-2025, as per the new grant from USAID, is to scale out Bt Cowpea in Nigeria, Burkina Faso, and Ghana to reach an adoption rate of 15-25 per cent with increased yields of 20 per cent. This effort will also target the development of a Second-Generation PBR CowpeaXTRA trait.
- ii) Increased cowpea production in Africa by at least 50 per cent from 6.675 million tons to 10.150 million tons which translates to US\$ 4,567,500,000 at an average price of (US\$450/tons).
- iii) Increased yields of local varieties from 0.3 – 0.6 t/ha to 0.6 – 2.0 t/ha resulting in an increased income of at least US\$270-US\$ 900.
- iv) Improved nutrition through high productivity and more consumption - cowpea contains 22 per cent protein.
- v) Reduce regional grain prices by 9.5 per cent, resulting in increased regional trade volume and demand by between 8.5 and 19.2 per cent.
- vi) Improved health linked to the reduction in insecticide herbicide sprays from about six to two times.

Key Challenges

- Cowpea seed production was greatly constrained by early cessation of rainfall and mid-season drought which resulted in poor grain filling and low yields.
- Banditry attacks experienced by some seed producers affected the harvesting operation and resulted in low output.
- In Nigeria, insecurity prevented effective monitoring of the fields in most parts of the country.
- In Ghana, delay in the review of the regulatory dossier submitted to NBA on 14th January 2021 due to delayed appointment of the NBA Board of Trustee by the president.

INITIATING COMMERCIALISATION OF TRANSGENIC DROUGHT-TOLERANT AND INSECT-PROTECTED MAIZE VARIETIES TO ENHANCE FOOD SECURITY IN SSA THROUGH THE TELA PROJECT

The Problem

Africa is a drought-prone continent, making farming risky for millions of smallholder farmers who rely on rainfall to water their crops. Maize is the most widely grown staple crop in Africa – more than 300 million people in Africa depend on it as their primary food source. Maize is severely affected by frequent drought and irregular rainfall, which lead to crop failure, hunger, and poverty. Climate change is

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
OBJECTIVES AND ACTIVITIES (CONTINUED)**

worsening the situation. Like drought, insect pests present a challenge for smallholder maize farmers in Africa who have limited resources to manage them effectively. During drought, maize is particularly susceptible to insect pests, and farmers can experience complete loss. The TELA Maize Project is, therefore, addressing the problem of drought and destructive insects, including stemborers and the Fall Armyworm (FAW).

Stemborers are known to reduce maize production in several countries in Africa. For example, in Kenya, stemborers reduce maize production by an average of 13 per cent or 400,000 tons of maize, equivalent to the normal yearly amount imported into the country. This damage is valued at more than USD 90 million. The FAW is a new devastating, transboundary maize pest that was first observed in Africa in 2016. If solutions are not put in place quickly, projections estimate that it could destroy up to 20 million metric tons of maize in Africa each year. This is enough to feed 100 million people. Big maize producers such as Nigeria and Tanzania, could lose half or more of their harvests to FAW, which can decimate an entire field in just a few days.

Objective

Successful commercialisation of TELA® maize varieties through local seed companies for use by farmers to mitigate effects of climate change especially moderate drought stress and losses to stem borers (Spotted stem borer [*Chilo partellus*], African stem borer [*Busseola fusca*], and Pink stem borer [*Sesamia calamistis*]) and Fall Armyworm (*Spodoptera frugiperda*) insect pests.

AATF Interventions

The TELA Maize Project is a PPP that started in April 2018, working towards traits deregulation, and initiating the commercialisation of transgenic drought-tolerant and insect-protected maize varieties to enhance food security in SSA. The project builds on progress made and lessons learned from a decade of excellent breeding work under the Water Efficient Maize for Africa (WEMA) Project. Through WEMA, 124 conventional drought-tolerant maize hybrids (DroughtTEGO®) have been released to farmers since October 2013. In addition, five insect resistant (Bt) TELA® maize hybrids have been released and commercialised to smallholder farmers in South Africa since 2016.

AATF works in this partnership with the internationally funded non-profit International Maize and Wheat Improvement Center (CIMMYT), the private agricultural company Bayer, and seven NARS in Ethiopia, Kenya, Mozambique, Nigeria, South Africa, Tanzania, and Uganda. Due to the lack of a conducive regulatory environment for commercialisation of GM crops in Tanzania and Uganda, activities have been temporarily paused since April 2020. AATF contributes its leadership, and unique experience in PPP, in intellectual property, project, technology stewardship, and regulatory affairs management expertise. CIMMYT provided high-yielding maize varieties that are adapted to African conditions and expertise in conventional breeding and testing for drought tolerance and insect protection.

Bayer provided several proprietary germplasms, advanced breeding tools and expertise, drought-tolerance and insect protection transgenes, and the biosafety regulatory package. The varieties developed through the project will be distributed to African seed companies through AATF without royalty payment (technology fees) and made available to smallholder farmers as part of their seed business. The NARS, farmers' groups, and seed companies participating in the project will contribute their germplasm, expertise in field testing, seed multiplication, and distribution. The project also involves local institutions, both public and private, and in the process expands their capacity and experience in agricultural biotechnology and biosafety.

Summary of Achievements

- One DroughtTEGO® hybrid (WE8206) was officially released and registered as SAMAZ 68 for commercialisation in Nigeria. This hybrid had the highest grain yield of 7.5 t/ha, outyielding the commercial variety by about 33 per cent; and was the most preferred by farmers. Fortunately, the TELA Bt version (WE8206BII) of the hybrid is available to facilitate early TELA Bt hybrid possible release and launch in 2023.
- The third confined field trials (CFT III) on the efficacy of stacked Bt MON89034 + DT MON87460 traited hybrids was successfully completed in 2021 in Nigeria. Results showed on average, hybrids with Bt MON89034 gave 19 per cent higher yield relative to the non-Bt, isogenic hybrids under artificial stem borer infestation and natural infestation by fall armyworm pests. The results were used to develop an environmental release dossier that was submitted in September 2021 to secure environmental release of TELA drought tolerant and insect protection traits from the National Biosafety Management Agency (NBMA) of Nigeria.
- The project received environmental release of TELA drought-tolerant and insect-resistant traits (MON87460 and MON89034) from the NBMA in less than three years of Nigeria joining the project partnership. This approval will allow for the planting of 12 potential TELA® Bt hybrids in two on-station sites in March 2022 for variety certification and commercialisation. After two years of waiting, an approval permit was received in Mozambique for multilocation Value for Cultivation and Use (VCU) trials for

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
OBJECTIVES AND ACTIVITIES (CONTINUED)**

potential TELA® Bt hybrids that will lead to traits deregulation, variety certification and an anticipated commercial launch of TELA hybrids from 2024.

- After successful NPTs for six TELA® Bt maize varieties evaluated across seven sites in Kenya, three best hybrids (WE1259B, WE3205B and WE5206B) with yield advantage of 15–67 per cent relative to the commercial checks, were recommended for variety release. Final approval for commercialisation through a cabinet decision is anticipated in 2022.
- About 32 tons of TELA seeds including 11.6 tons of Bt MON810 hybrids for Kenya, have been produced and stored in South Africa in readiness for traits introduction and launch in Ethiopia, Kenya, and Mozambique. The seeds will only be exported to any TELA country for introduction and launch when transgenic hybrids are approved for commercialisation.
- The project developed a stewardship plan involving insect resistant management of bag-in-bag refugia strategy for deployment of TELA Bt MON810 hybrids. The plan received positive evaluation by an external consultant who provided some useful recommendations that were used to finalise the plan ready for roll out during product launch.
- Finally, NARS Product Launch Collaboration Agreements (PLCAs) were drafted for Ethiopia, Nigeria, and Mozambique. The PLCA for Nigeria has been finalised but is pending for Ethiopia and Mozambique. Eight sub-licenses were issued to four small and medium enterprise (SME) seed companies for testing and/or commercialisation of some DroughtTEGO® hybrids in Kenya and Tanzania.

Expected Impact

- By the end of five years, the project will have availed to smallholder farmers through licensed seed companies at least 250 tons of certified seed of a compelling set of 10 transgenic TELA® maize varieties that combine drought tolerance, insect resistance, and other important yield and disease-resistance traits.

Key Challenge

- Anti-biotechnology activism and limited political will in some countries to adopt agricultural biotechnology continue to be the key challenge for the TELA Maize Project. The global COVID-19 pandemic and the associated travel restrictions slowed down the implementation of some activities. The project had to resort to the use of virtual meetings and field photos to monitor the implementation of activities by partners.

DEVELOPING NITROGEN-USE EFFICIENT, WATER-USE EFFICIENT AND SALT TOLERANT (NEWEST) RICE VARIETIES FOR USE BY SMALLHOLDER FARMERS IN SSA

Objective

The NEWEST Rice Project is a multiple-partner collaboration project designed to develop and disseminate genetically improved African rice varieties with enhanced tolerance to abiotic stresses, specifically Nitrogen-Use Efficiency (NUE), Water-Use Efficiency (WUE) and Salt Tolerance (ST) for the benefit of smallholder farmers in Africa.

The Problem

Rice consumption in SSA has been growing by 6 per cent per annum over the years, less than double the rate of population growth resulting in demands that far exceed local supply. The rising demand for the commodity has been largely attributed to changing food preferences in both urban and rural areas coupled with high population growth rates and rapid urbanisation in Africa. This demand and consumption rate indicates that rice is an important staple food and a commodity of strategic significance across most African countries. Regardless of its importance, rice productivity is generally low (2.2 MT/ha) in Africa compared to global average of over 4.5 MT/ha (FAOSTAT), therefore a need for specific interventions to address target production constraints. Abiotic constraints associated with soil nutrient depletion and imbalances (salinity, nutrient deficiencies, and toxicities) and water availability (drought and excess water) contribute significantly to low rice productivity in Africa.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
OBJECTIVES AND ACTIVITIES (CONTINUED)**

AATF Intervention

The NEWEST Rice project was launched by AATF in 2008 as a strategic pathway to addressing food insecurity in the face of many abiotic constraints to rice production and impending challenge of climate variability in Africa. The initiative strives to genetically transform some varieties of the New Rice for Africa (NERICA) using plant transformation technologies to improve their productivity in nitrogen-deficient soils, drought prone regions and in soils with high salinity. To ensure adoption the project will introgress the gene into the farmer preferred varieties in the respective country of deployment and commercialisation.

Achievements

A total of 33 events comprising 15 Nitrogen Use Efficient (NUE) and 18 Nitrogen-use Efficient, Water-use Efficient and Salt Tolerant (NEWEST) events were developed by Arcadia Biosciences and distributed to all partners for CFTs in Crops Research Institute (CRI)

Ghana, National Crops Resources Research Institute (NaCRRI) Uganda, National Cereals Research Institute (NCRI) Nigeria and International Centre for Tropical Agriculture (CIAT) Colombia. The result of 15 CFTs from 2012-2016 in four locations (Ghana, Uganda, Nigeria, and Colombia) using four nitrogen levels (0kg, 30kg, 60kg and 90kg) and the molecular characterisation of the events showed NUE12 as the lead event and NUE9 as the second to serve as back-up for the lead event. Both events consistently outperformed the Bulk Sibling Nulls (BSN) and NERICA 4 (not transformed) with an average of 15 per cent yield increase. In addition, the regulatory trials conducted using NUE12, NERICA 4 and 8 between 2019-2020 at four locations in Nigeria (2), Ghana (1), and Uganda (1) showed that NUE12 rice exhibited normal growth and development and did not display any characteristics that would indicate any increased risk to the environment.

The compositional analysis was conducted in consistence with the guidance provided in the Organisation for Economic Cooperation and Development (OECD) consensus document on compositional considerations for new rice varieties (OECD, 2016), using paddy rice and straw samples. The purpose of this study was to compare concentrations of key nutrients and anti-nutrients in samples of paddy rice and straw collected from transgenic event NUE-12 and non-transgenic control rice grown during 2020 at four different locations representing upland rice growing conditions in Ghana, Nigeria, and Uganda.

The compositional assessment of NUE-12 rice included analyses for proximates, fibre, and minerals in samples of straw, and analyses for protein, fat, fibre, ash, carbohydrate, polysaccharides, minerals, vitamins, amino acids, fatty acids, and key anti-nutrients in grain samples. The mean concentration of each compositional component measured in samples derived from NUE-12 and control NERICA 4 rice were within the ranges of natural variability reported in the scientific literature and public databases for conventional rice varieties with history of safe consumption. Based on the results, it was concluded that grain and straw derived from NUE-12 rice are compositionally equivalent to their conventional counterparts, therefore, there is no biologically meaningful changes that had occurred as an unintended consequence of the genetic modification in the composition or nutritive value of the grain and straw. These data, together with a complete molecular genetic characterisation of NUE-12, including the demonstration of stability over multiple generations and inheritance pattern, updated bioinformatic analyses, other physicochemical studies, and the results of the early food safety evaluation (EFSE) for NUE protein, are already being used in preparing the primary regulatory dossier for submission in Ghana and Nigeria to secure environmental release of NUE12.

Also, confirmatory efficacy trials were conducted to validate the results that led to the lead event selection. The trials were meant to generate data to validate previous results of efficacy trials that led to the selection of NUE12 as the lead event. NUE 12 had an average of 20 per cent yield increase over conventional varieties (and performed well beyond the 15 per cent benchmark target set at the beginning of the project as a minimum for NUE product as proof of concept) in the trials that led to its selection as the lead event. Unfortunately, the confirmatory efficacy trials had implementation challenges caused principally by COVID-19 restrictions that limited on-site technical backstopping and oversight visits from AATF to the project countries. Thus, the results could not conclusively validate the earlier ones.

Expected Impact

- A total welfare gain of more than \$0.5bn could potentially be achieved if farmers adopting rice technologies are able to increase their yields by at least 30 per cent.
- A reduction in rice imports leading to foreign currency savings of more than US\$300 million per year.
- Increase of household income of at least US\$400 per annum.
- At least 500,000 households would be accessing or adopting the new rice varieties within the first three years after commercialisation.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
OBJECTIVES AND ACTIVITIES (CONTINUED)**

Challenges and Lessons Learnt

The major challenge during the just concluded year was activity implementation due Covid-19 lockdowns in project countries thus making it difficult to effectively conduct CFTs meant to validate the results that led to the lead event selection. As a result, the project team was unable to submit the dossier as earlier planned due to the inability to validate efficacy results for the NUE technology. However, these trials will be repeated in 2022 to validate the efficacy of the NUE trait using the lead event (NUE12).

Key Beneficiaries of the Project

This project will directly benefit resource poor farmers (mostly women) in Africa, especially those with lands with poor soils, that produce little or nothing due to low nitrogen levels, drought, or salinity. It will also empower African scientific and agricultural communities to better deliver other improved technologies and services to farmers in the future.

DEVELOPING HYBRID RICE FOR USE BY SMALLHOLDER FARMERS IN SUB-SAHARA AFRICA

Objective

The Hybrid Rice Project aims to improve food security and rural livelihoods among African small-scale rice producers, by developing hybrid rice, exploring its significant yield advantage to create sustainable hybrid rice agro-businesses to increase rice farming in East, West and Southern Africa. Implemented over a 15-year period, the project expects to enable African researchers and seeds producers to reach 500,000 rice farmers with hybrid rice that delivers a yield advantage of at least 1 ton per hectare over the most competitive inbred varieties.

The Problem

Rice (*Oryza spp*) is an important staple food and a commodity of strategic significance across much of Africa. Driven by changing food preferences in the urban and rural areas and compounded by high population growth rates and rapid urbanisation, rice consumption in SSA has increased by 5.6 per cent per annum over the years, less than double the rate of population growth. However, the area under rice production in SSA has stagnated at about 8 million hectares producing about 15.5 million tonnes per year against an annual consumption of 27 million tonnes. These production and consumption trends imply a production deficit of about 11.5 million tonnes per year valued at US\$ 4 billion that is imported annually.

Thus, the rice production deficit presents a great development challenge to governments and development agencies in SSA. The slow growth in domestic rice production has been attributed mostly to the very low yields being achieved by rice farmers in SSA. In addition, poor agronomic practices, insufficient private sector investment in rice seed production, non-competitiveness of locally produced rice, low capacity in technologies that can improve productivity such as hybrid technology, high production costs and poor quality are among the challenges that makes it difficult for SSA to meet its rice need. To meet the increasing demand for rice consumption, there is the need to deploy technologies like hybrids that can enhance yield per hectare to boost local production as well as help in building viable agri-businesses along the whole crop value chain.

AATF Intervention

AATF is working with public and private partners to develop indigenously bred rice hybrids that are well adapted to the growing conditions in Africa and with significant yield advantage. The partnership is developing 2-line rice hybrids and parental lines alongside the development of an information technology tool with interpolated weather surfaces to predict temperature regimes required for the management of 2-line hybrid rice production risk. The project is being managed by AATF in a way that ensures that technology partners focus on their technical work and that the outputs of the project contribute to global public goods.

AATF is also providing a connection to the African seed sector researchers and seed firms. AATF provides an in-depth understanding of African seed companies and the NARS and links between the partners - Hybrids East Africa Ltd (HEAL), and the researchers and seed firms that the project has trained. As part of the efforts towards using the hybrid rice technology to increase production in SSA and enhance business linkages in the value chain, AATF has brought together private companies and public institutions, such as HEAL, Advanta, Afritec, Bayer, International Rice Research Institute (IRRI), Africa Rice Centre (AfricaRice), national rice programs and other SMEs to achieve greater impact and create synergy for promoting, marketing and commercialisation of hybrid rice technology for the benefit of African farmers. This initiative is a PPP known as the Alliance for Hybrid Rice in Africa (AHyRA).

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
OBJECTIVES AND ACTIVITIES (CONTINUED)**

Achievements

The project has led to a change in practice in the hybrid rice system in Africa. Indigenous rice hybrids are now being developed in the continent by African companies for use in Africa. This is in comparison to the former practice of importing hybrid rice developed outside for evaluation in Africa.

Four seed companies (local and regional) that had never been involved in rice production before are now participating in the testing of the hybrids as a potential crop for the diversification of their crop portfolio. In this regard, the companies have already acquired the parental lines from the project and are currently conducting performance tests in Tanzania, Nigeria, Ghana, Kenya, and Zimbabwe.

AHyRA was also launched to enhance production and promotion of hybrid rice varieties by strengthening PPPs among major stakeholders. Since inception in 2019, AHyRA, has been promoting the wide development and dissemination of quality, high yielding and well adapted rice hybrids in the region. It is also developing and improving delivery and commercialisation pathways for hybrid rice towards strengthening the value chain through the extensive use of the hybrid technology. AHyRA is already facilitating business linkages between seed companies with capacity for breeding and seed production and those with little or no capacity for such activities but have a market reach for the sale of hybrid rice seed. For example, FreshCo contracted Afritec to produce hybrid seed for them. For sustainability, the capacity of four private seed companies has been enhanced for hybrid rice development and commercialisation in SSA.

Three new rice hybrids were released in Kenya in 2021 during the National Variety Release Committee (NVRC) meeting that took place in June 2021 and were gazetted by the government of Kenya in December 2021. The materials were the three hybrids that performed best during the National Performance Trial Committee (NPTC) and Distinctness, Uniformity and Stability (DUS) concluded by the Kenya Plant Health Inspection Service (KEPHIS) in the first quarter of 2021. The new rice hybrids are high yielding both for seed (interest of private seed companies) and grains (interest of farmers). In addition to high yielding, they have desirable grain quality (long slender grains) for the Eastern Africa rice consumer. With this commercial release, eight rice hybrids have been released by the project in Kenya. Apart from these eight hybrids, three other hybrids have been released by our partners (Afritec, two and Bayer, one), making a total of 11 high yielding rice hybrids released in Kenya. In addition to this, Advanta has also released one hybrid in Tanzania. In all, 12 rice hybrids are already commercially released in Eastern Africa.

AATF and HEAL produced 4.5 tonnes seeds of three rice hybrids (AH18003, AH18004 and AH18007) in Holo, to prime the market for commercialisation in Kenya and for use in establishing on-farm farmer managed demonstration trials to create awareness on the benefits of hybrid rice seeds to farmers. Two season on-farm trials were conducted in Tanzania using seven rice hybrids and three best commercial inbred rice in the country resulting in three hybrids outperforming the best commercial inbred check. Socio-economic analyses also elucidated that farmers preferred two of the best rice hybrids over the checks. The three high yielding hybrids will be submitted for NPTs in the next production season in Tanzania. Hybrid rice was also scaled to Togo and adaptation trials conducted resulting in three rice hybrids that were well adapted to the irrigated rice ecology with a yield advantage of more than 2 tons/ha over the best commercial inbred that was used as a check. Seeds of another three rice hybrids have been sent to Togo for on-farm trials through the AHyRA germplasm testing platform.

Expected Impact

- Development of 2-line hybrid rice germplasm that is adapted to African conditions.
- Increased yields of at least one ton over the best commercial varieties available for use by smallholder farmers.
- Skills development for seed companies in 2-line hybrid rice technology.
- Development of a web-based IT tool for predicting hybrid rice production environment.
- Promote and build business linkages for hybrid rice along the commodity's value chain.

Challenge

Project funding will end in April 2022. However, discussions around future funding have been initiated with the project donor.

Key Project Beneficiaries

The key beneficiaries are seed companies, scientists, rice farmers (male and female), millers and research institutes in Africa.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
OBJECTIVES AND ACTIVITIES (CONTINUED)**

IMPROVING CASSAVA PRODUCTIVITY THROUGH MECHANISATION AND AGRO-PROCESSING

Project Goal

The Cassava Mechanisation and Agro-processing Project (CAMAP) aims to improve cassava productivity, increase efficiency in agronomic operations, reduce drudgery as well as create market linkages for smallholder farmers in three project countries (Nigeria, Zambia, and Uganda). The project is facilitating best-bet production practices among farmers by promoting the planting of improved stem varieties, timely weeding, and fertiliser and herbicide application. With a view to providing a sustainable environment for cassava mechanisation in the partner countries, the project has initiated mechanisms to build and support agro-service platforms which provide commercial operations to farmers and training of service providers on enhanced mechanisation delivery and efficiency. In line with the agribusiness concept of the project, farmers are being linked to existing markets to stimulate a functionally efficient supply and demand chain for cassava. The project, therefore, builds a strong pull effect to strengthen needs for increased production. The project works along the whole value chain while also addressing gender issues to meet other project goals like improved income and employment for youth and women.

Project Objectives

- Negotiate access and transfer of cassava mechanisation and agro-processing technologies for use by smallholder farmers.
- Increase cassava production through mechanisation across the entire value chain and thus reduce post-harvest losses and demand for intensive labour.
- Add value to the cassava industry through value addition and the creation of market linkages between smallholder farmers and agro-processing centres.
- Build the capacity of local entrepreneurs to design prototype machines, manufacture, maintain and repair equipment for planting, harvesting, and processing cassava.
- Expand the utilisation of safe, quality, diversified, value-added cassava products and derivatives.

The Problem

Cassava is a staple crop for 500 million people in SSA. Nigeria accounts for 55 percent of the world's cassava production. Although Nigeria is the highest cassava producing country in the world with over 40 million metric tonnes, its output per unit area is still very low (9–12 tons/ha) as compared to over 25 tons/ha recorded in Asia and Latin America. The yield level on farmers' fields (for landraces and improved varieties) has remained very low in SSA due to inefficient production systems. Cassava production in Africa predominantly remains manual and labour intensive and employs traditional tools in all operations. One of the key constraints to cassava production in Africa is the lack of mechanisation or appropriate production and processing tools. This remains laborious to women and less attractive to youths who want to go into cassava production. In addition, market opportunities for the crop in Africa are limited compared to other cassava-producing regions. This situation has hindered value addition because it is farmers who have access to markets that are likely to adopt technologies that enhance productivity.

Project Overview

Mechanisation of cassava production and processing has been identified as the most critical constraint to the development of the sector in Africa. High labour requirement for cassava production operations includes land clearing and preparation, planting, weeding, and harvesting. These requirements come with high costs over a long growing season that makes cassava production less attractive to farmers, especially youths, compared with other staple crops that are less labor-intensive and require less operational costs. Other high operation costs are those related to transportation, storage, and post-harvest processing. To address the problem, the New Partnership for Africa's Development (NEPAD) has launched the Pan-African Cassava Initiative, while several countries, such as Nigeria and Ghana, have started national initiatives to promote the use of cassava in industries. Cassava for large-scale use, such as the mandated incorporation of 10 per cent cassava flour in wheat flour for bread making in Nigeria, requires many small-scale cassava processing units. However, the existing capacity for manufacturing cassava processing equipment is limited, and unless it is upgraded, Africa's farmers and entrepreneurs are unlikely to benefit from the new market opportunities. The project, therefore, aims to stimulate cassava mechanisation along the product value chain to ensure increased production and value addition and, on the other hand, reduce post-harvest losses. Improving cassava production systems will be critical to maximising its full potential as a cash crop, especially for smallholder farmers.

AATF Intervention

AATF is negotiating access, building capacity for local fabricators, backstopping enterprise development, providing stewardship of the technologies, deploying, and creating market linkages through CAMAP. AATF has been providing resources for project development,

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
OBJECTIVES AND ACTIVITIES (CONTINUED)**

testing of the technology, overall partnership management, business enterprise development, and market linkage expertise. Manufacturers in regions with appropriate technologies but who are reluctant to supply equipment to African businesses for fear of piracy and subsequent loss of market have been approached. They have shown interest in partnering with African entrepreneurs to produce high-quality equipment. CAMAP adopts a value chain approach to addressing constraints faced by smallholder cassava farmers which not only involves mechanisation and agro-processing, but also a systems approach that includes the use of improved high-yielding and disease-resistant cassava varieties, and best agronomic practices (including optimum plant density, fertiliser and herbicides application, weeding, scheduled dates for planting and harvesting) incorporated into mainstream project activities. Through market linkages, CAMAP is assisting in reducing post-harvest losses by over 80 per cent, reduced labour drudgery by 90 per cent and significantly increased farmer income from US\$700 – 900 per ha to US\$2,000 - US\$3,000 per ha.

Achievements

Mechanisation in Nigeria

AATF accessed a cassava processing prototype from Clayuca, Colombia. This prototype uses innovative and cutting-edge technology whereby processing is done without peeling the root which results into High Quality Cassava Flour (HQCF) for human consumption and Secondary Grade Cassava Flour (SGCF) for animal feed. This prototype will also be used to process pro-Vit. A/yellow cassava variety which is very important for nutrition.

- In addition to cassava processing, AATF is also partnering with Agridrive Ltd, an AATF social enterprise that is commercialising mechanisation and digital agriculture in Nigeria, on the application of digital tools using drones to generate field metrics on a series of parameters influencing agricultural productivity. The drone initiative is linked to the Agridrive App, which is a mobile platform that links farmers to mechanisation service provision, best agronomic practices, weather, and market information. Due to the rapid global growth and increasing application of mobile and digital technologies in business, it is now possible to utilise these tools to drive a new farming revolution - one that is technically guided based on data and information access/sharing. The drones have been used to capture field metrics related to soil management needs, weed and nutrient variation (especially for nitrogen) and have been applied to cassava fields of over 456 ha. The drones are currently offering technical support service to guide mechanisation applications for massive cassava production as they provide information on plant population, soil fertility, pest and disease prevalence and moisture levels in the soils. During the year, a total of 800 farmers were linked to AATF technologies (seed and non-seed based) via digital solution platforms.
- The drones have efficiently been utilised for optimisation of farming operations related to weed spraying and general crop health based on accurate field assessment from data generated by drones resulting in reduced operation costs, improved crop quality, and increased yields.

Expected Impact

- Reduced post-harvest losses for sustainable food security.
- Increased farm efficiency through mechanisation and digital solutions.

Key Challenges and Mitigation Measures

Insecurity in Nigeria has affected the working pace. This has been mitigated by adjusting the working hours for machine operators to ensure they work when it is safe.

EU HORIZON 2020 BIO4AFRICA PROJECT -SUPPORTING DEPLOYMENT OF SIMPLE, SMALL-SCALE, AND ROBUST BIOBASED TECHNOLOGIES

Background and the Problem

Africa's population is anticipated to reach 2 billion people by 2050 amidst unprecedented demographic, socio-economic, environmental, climatic and health transitions. Meanwhile, poverty and food security have increased with rising population. Under this scenario, boosting incomes and food security becomes imperative, with bioeconomy offering new opportunities to boost revenue in rural Africa.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
OBJECTIVES AND ACTIVITIES (CONTINUED)**

EU Horizon 2020 BIO4Africa “Diversifying revenue in rural Africa through circular, sustainable and replicable bio-based solutions and business models” is a consortium project with the French Agricultural Research Centre for International Development (CIRAD) as the lead and AATF a subgrantee. It involves 25 partners and four countries (Uganda, Ghana, Cote D’Ivoire, and Senegal). The purpose of the project is to transfer simple, small-scale, and robust bio-based technologies adapted to local needs and contexts; empowering farmers and rural communities to produce a variety of bio-based products and energy; and improving the environmental, economic, and social performance of their forage agri-food systems. AATF is involved in the needs analysis, technology screening, co-definition of technologies to be transferred with local farmers and communities and business model development.

Objective

The objective of the project is to support the deployment of bioeconomy in rural Africa via the development of bio-based solutions and value chains with a circular approach to drive the cascading use of local resources and diversify the income of farmers. The focus is on transferring simple, small-scale, and robust bio-based technologies adapted to local biomass, needs and contexts (green biorefinery, pyrolysis, hydrothermal carbonisation, briquetting, pelletising, bio-composites and bioplastics production). In doing so, the project aims at empowering farmers to sustainably produce a variety of higher value bio-based products and energy (animal feed, fertilizer, pollutant absorbents, construction materials, packaging, solid fuel for cooking and catalysts for biogas production), significantly improving the environmental, economic, and social performance of their forage agri-food systems.

AATF Interventions

AATF is leading Work Package (WP) 1 and 7, and acts as the support partner to the other seven work packages. Within WP1, AATF implemented Task 1.4, which focuses on co-defining the technologies that will be adapted and transferred to farmers and other rural stakeholders. This involved validation of the technologies and conducting cost benefit analysis as well as establishing a business case. AATF delivered a report on specifications and guidelines on how the technologies could best be developed and adapted to meet the identified needs, contexts, and opportunities of each country. Under WP7, AATF will be taking lead in task 7.4 that focusses on policy outreach and recommendations for deploying bioeconomy in rural Africa. AATF will develop policy maker evidence-based recommendations for deployment of bio-based solutions.

Summary of Achievements

- **Task 1.4 Co-definition of technologies to be transferred with local farmers and communities**
In achieving this objective, AATF conducted a cost-benefit analysis (CBA) of the technologies to be implemented in the four countries. All the technologies had a benefit cost ratio of more than one and a positive net present value implying economic viability of the biobased technologies. The identified biobased technologies for Ghana were pyrolysis, pelletisation and green biorefinery; in Senegal it was pyrolysis, densification, bio digestion, and briquetting while in Cote D’Ivoire it is pelletisation, production of bioplastics and biochar production for soil amendment technologies. Small scale biorefinery and hydrothermal carbonisation were selected for Uganda. The CBA ratios indicated there is value in investing in the technologies.
- The CBA was used to assess the viability and acceptability among the respondents in the four countries from a policy, economic, technological, social-ethical, and environmental perspective. The report indicated an overall awareness of the existence of bio-based solutions and approaches in agriculture, and most respondents were already implementing a more traditional approach employing food components for compost and biofertilizers. In Uganda and Senegal some respondents have used techniques such as briquetting, pyrolysis and anaerobic digestion in the past. The acceptance and the potential adoption of bio-based approaches within the farm operative is widely and positively perceived if it comes with a high-quality price ratio to face off initial investment in the machinery and training of the workforce.
- **Task 7.4 Policy outreach and recommendations for deploying the bioeconomy in rural Africa**
This task is mainly focused on developing policy recommendations and briefs that will facilitate stakeholder engagements and advocacy efforts towards creating an enabling environment for: (1) the deployment of bio-based techniques and (2) markets for bio-based products. During the first year of the project, efforts were geared towards preparing the necessary documentation needed for stakeholder engagement.

Specifically, the task implemented included the following:

- Contribution to development and validation of the data collection instruments used for a baseline study implemented under WP1. The data was used to assess the context of rural communities and their capacity to adopt/adapt bio-based technologies, determination of the available feedstocks, and feasible biotechnologies suitable for the area.

AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021

TRUSTEES' ANNUAL REPORT (CONTINUED)
OBJECTIVES AND ACTIVITIES (CONTINUED)

- The reports from these two activities were reviewed and policy related elements identified for information packaging and use in stakeholder engagement.
- In preparation for the first policy makers workshop, literature review and document analysis was conducted to assess the current policy and regulatory environment relevant for the development of a bio-based economy in the target countries. The activity will continue in the next reporting period.
- The green biorefinery unit has been installed in Uganda and first tests are about to start.
- The hydrothermal carbonisation, HTC pilot unit is under development in Senegal.
- The selection of densification technologies to be piloted is under way for Senegal and Uganda. Densification technologies in Ghana and Cote D' Ivoire have been selected.
- Candidate businesses are being selected for BIO4AFRICA accelerator programs, with interviews taking place in the countries.

Expected Impact

The project is expected to:

- Provide additional income for farmers through creation of new jobs in rural areas from the agricultural value chains.
- Improve the environmental by ensuring re-circulation of nutrients by exploiting all side-streams and reduction of air and soil pollution due to more efficient mineral cycles.
- Offer more than 300 farmers and farmer groups of all sizes (inclusive of small dairy and lower-income farmers, women farmer groups and transhumant pastoralists among others) the opportunity to test the technologies and products in real productive conditions.

Key Challenges and Mitigation Measures

Key external concerns that could affect the uptake of the small-scale technologies include:

- **Feedstock supply chain:** Albeit small-scale technologies advance the opportunity to valorise feedstock locally and help overcome issues around mobilisation and scale, the feedstock for bio-based applications may compete with other non-food uses (e.g., forage for bedding).

Mitigation measure: The project will focus on small-scale technologies and circular business models that do not create competition of resources.

- **Demand side:** Bioeconomy is still a new concept to many, especially amongst rural African communities. Many agricultural practitioners are concerned about the risks associated with diversification. If they are producing new products from side streams, they need to know that there is a market for them, and the process makes sense from an economic perspective.

Mitigation measure: The project will conduct thorough value chain and market analyses aimed at producing circular business models considering the marketability of end-products and the needs of farmers and rural communities.

- **National environment conditions:** National environment conditions can help promote or restrict certain technologies from advancing to market. Policies incentivising the production of energy from biomass can reduce the opportunity to find extra value in the production of other products, fine chemicals, feed etc. Similarly, funding opportunities for clean technologies vary by jurisdiction.

Mitigation measure: The project aspires to contribute via the development of funding guides, detailing different financing options as well as the development of several policy briefs along with recommendations addressing key policy aspects for the adoption of the small-scale bio-based technologies.

TECHNOLOGIES FOR AFRICAN AGRICULTURAL TRANSFORMATION (TAAT) – MAIZE COMPACT

The Problem

Maize is a leading staple crop and an essential source of calories and food security to over 300 million people in SSA. However, its production is impacted by a myriad of challenges, including erratic rainfall patterns due to climate change, pests, diseases, and suboptimal use of fertilizers. Elite climate smart maize hybrids have been developed through various breeding programs, including the

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
OBJECTIVES AND ACTIVITIES (CONTINUED)**

WEMA partnership, which released over 120 drought-tolerant (climate-smart) hybrids trademarked DroughtTEGO®. Efforts are required to ensure that farmers can access, adopt, and use these hybrids to enhance productivity. Scale-up efforts need to be revamped, and more importantly, facilitation of high-quality seed production and market linkages for maize grain farmers to incentivise them to adopt these elite hybrids. This will ensure that smallholder farmers are not only food secure, but they economically benefit from selling surplus grain that they produce by planting high-yielding climate smart maize hybrids.

Objective

Funded by the African Development Bank (AfDB) under its Feed Africa Strategy (2016 -2025), the TAAT Maize Compact (TMC) aims to disseminate and scale out water efficient and other climate smart maize technologies from WEMA, Drought Tolerant Maize for Africa (DTMA), Drought Tolerant Maize for Africa Seed Scaling (DTMASS), Stress Tolerant Maize for Africa (STMA), International Institute of Tropical Agriculture (IITA) and NARS breeding programs across SSA. The technologies are scaled out in collaboration with both the public and private sector, and notably, with significant participation of commercial seed companies. Initially, TMC worked in Kenya, Uganda, Tanzania, Ethiopia, Rwanda, Zambia, Zimbabwe, Nigeria, Cameroon, Ghana, and Benin. However, during 2021 due to budget constraints, TAAT maize activities were implemented in only five countries (Kenya, Uganda, Tanzania, Nigeria, and Ghana).

AATF Interventions

AATF directly implements TAAT maize activities in East and Southern Africa while IITA implements activities in West and Central Africa. However, AATF conducts the overall coordination of the maize value chain. In-country supervision is conducted by appointed NARS personnel (TAAT Maize NARS Leads) in respective countries.

AATF, through its expertise in deployment and commercialisation, and in consultation with key stakeholders in maize production, identified proven high yielding maize varieties, which were earlier licensed to partner seed companies under the WEMA project, DTMA and other breeding pipelines and facilitated scale out activities such as seed production, field demonstration plot establishments, field days, distribution of small seed packs, employing good agricultural practices and post-harvest management training sessions to stimulate adoption and enhanced production by farmers, hence motivating seed companies to produce more seed due to the high demand created by AATF and its partners.

AATF engaged farmer groups and community-based organizations (CBOs) to facilitate market linkages between maize farmers and output markets so that they can sell surplus produce with ease at profitable prices. This incentivised farmers to adopt new varieties and other maize technologies due to the promise of markets for their surplus production.

Summary of Achievements and Impact

The primary beneficiaries of maize technology transfer efforts are smallholder farmers. The maize compact endeavours to involve women and youth in the value chain aiming at increasing their participation. From mid-2018 to December 2021, the compact cumulatively deployed a maize technology toolkit with eight components increasing productivity by 30 per cent across the target countries. TAAT phase one ended in December 2021, and significant cumulative achievements were recorded.

Through its PPP, the compact cumulatively reached 2,748,399 direct beneficiaries with climate smart maize seed through field and open days, hands-on training sessions and small seed packs distribution. Working with a total of 82 partners, including seed companies, the maize compact facilitated the establishment of 5,074 demonstration plots, conducted 876 field days, and distributed 105,617 free small pack seeds to promote uptake of maize technologies by farmers. In addition, 24,486 tonnes of maize certified seed were commercialised to cultivate 979,440ha using climate smart varieties with a potential to produce at least 2.2 million tonnes of grain. In Kenya, some farmer groups managed to increase their maize yields by 50 percent (from 1.5t/ha to 2.25t/ha) using TAAT maize technologies.

Key Challenges

- Budget cuts within the TAAT Program and spreading of year 1 budget to cover three years of the program resulted in very few activities being conducted in 2021.
 - Mitigation: TAAT Maize activities will resume once TAAT phase II is approved probably in quarter four of 2022.
- Emerging Fall Armyworm pest that is discouraging farmers due to the significant damage it inflicts to the maize plant.
 - Mitigation: Farmers and extension agents were trained on integrated pest management (IPM) practices to support optimum production. In addition, Fortenza Duo insecticide treated maize seed was deployed in Zambia and Zimbabwe, to protect the maize plants against FAW during the first four weeks of crop establishment.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
OBJECTIVES AND ACTIVITIES (CONTINUED)**

TECHNOLOGIES FOR AFRICAN AGRICULTURAL TRANSFORMATION (TAAT) – POLICY ENABLER COMPACT

The Problem

The TAAT Policy Enabler Compact was designed to support TAAT Commodity Compacts through activities aimed at creating an enabling environment for technology deployment and adoption by farmers. This stemmed from the realisation that agricultural technologies have not been widely adopted in many parts of Africa due to several policy, regulatory and institutional challenges. These include: (i) weak agricultural extension systems; ii) poor linkages between research and extension; iii) long-drawn technology verification and release systems; iv) insufficient attention to incentivise private sector participation in commodity value chains; v) poor market linkages; vi) weak policy and regulatory environments; and viii) the absence of regionally coordinated policy and regulatory processes to deliver technologies across similar agro-ecological zones. The TAAT Policy Enabler Compact was thus rolled out in 2018 to address the foregoing challenges through advocacy for policy reform interventions essential for building functional seed systems with effective variety release and registration mechanisms, spurring market incentives and efficiency along agricultural value chains, and facilitating access to quality inputs through accreditation of agro-input suppliers.

Objectives

Funded by the AfDB under its Feed Africa Strategy (2016 -2025), the work program for TAAT Policy Enabler is anchored on four interdependent objectives namely: (1) assessment of policy and regulatory environment to facilitate creating a strong seed system for regional member countries via an evaluation and prioritisation of interventions that can be financed as part of TAAT country programs and dissemination to the seed industry; (2) increasing access and availability of quality seeds via accreditation of seed, fertilizer, and agro-input suppliers; (3) supporting harmonisation of regional technology release and registration policies through the study of existing protocols; and (4) facilitating competitive value-added chains through an analysis of existing value chain studies and synthesis of policies that create market incentives for farmers and agribusinesses.

AATF Interventions

Since inception in 2018, AATF coordinated the TAAT Policy Project while also implementing activities directly and also collaboratively with partner institutions i.e., IITA and The African Seed Access Index (TASAI Inc) to address some of the stated objectives. For instance, AATF collaborated with TASAI to conduct rapid country assessment of the seed policy environment in 15 countries (Burkina Faso, Burundi, Cote d'Ivoire, Democratic Republic of Congo (DRC), Liberia, Mali, Nigeria, Rwanda, Sierra Leone, Uganda, Malawi, Tanzania, Kenya, Zambia, and Zimbabwe). Assessment missions primarily sought to map the seed system in order to identify policy, regulatory and institutional gaps, and challenges to inform focused discourse with governments on essential policy interventions to engender efficiency in quality seed supply.

Other assessments carried by AATF focused on select value chains and sought to review and synthesise policies to propose interventions that can help create market incentives for farmers and agribusinesses. Towards this end the following assessments were carried out: (1) assessment of maize and cassava value chain and engagement of key actors in Nigeria, Mali, and Tanzania to identify and prioritise policy and institutional gaps along the value chains; (2) review of the small ruminant and poultry value chains in Ethiopia, Mali, and Nigeria; and (3) assessment of the rice value chain to identify policy related challenges.

In addition, AATF has also worked collaboratively with CORAF and regional economic communities (RECs) including the East African Community (EAC), Economic Community of West African (ECOWAS) and Common Markets for Eastern and Southern Africa (COMESA) to facilitate policy dialogue forums in support of harmonisation of regulations for testing, release, and registration of seed and other agro-inputs. In the course of these regional engagements, we have witnessed updating of crop variety catalogues to promote regional trade in seed, and of quarantine pest lists in ECOWAS in aid of cross-border seed trade and the recent adoption of harmonised guidelines and protocols for testing and registration of pest control products in EAC.

Achievements

Country policy assessment and advocacy was carried out to catalyse emergence of desirable regulatory and institutional reforms in the seed sub-sector. Towards this end, rapid country assessment of the seed policy environment was completed in 15 countries (Burkina Faso, Burundi, Cote d'Ivoire, DRC, Liberia, Mali, Nigeria, Rwanda, Sierra Leone, Uganda, Malawi, Tanzania, Kenya, Zambia, and Zimbabwe). Assessment missions primarily sought to map the seed system in order to identify policy, regulatory and institutional gaps and challenges to inform focused discourse with governments on interventions to engender efficiency in quality seed supply. In the process, many policy dialogue workshops were organised in the 15 countries, where stakeholders drawn from government, seed companies, NGOs, and agro-input dealers were engaged.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
OBJECTIVES AND ACTIVITIES (CONTINUED)**

The policy dialogue events triggered commitments by countries (through signed communiqués) towards implementation of regulatory and institutional reforms in the seed sub-sector. Notably, the dialogue events and policy advocacy efforts contributed to the following:

- Adoption of National Seed Policy in Uganda in 2018
- Adoption of Provincial Seed Decrees in DRC
- Updating of National Variety Catalogue in DRC
- The passage of Seed Law in Liberia in 2019
- The passage of Plant Breeders Act in Malawi in 2019
- The on-going development of the Plant Variety Protection (PVP) regulations in Malawi
- Development and Adoption of the *Regional Executive Regulation for Phytosanitary control & certification of seed and seedling* for West Africa in 2020
- Updating of the Regional Variety Catalogue for ECOWAS in 2020

In addition, the TAAT Policy Compact sought access and availability of quality seeds via accreditation of seed, fertilizer, and agro-input suppliers by spearheading assessment of existing accreditation frameworks for agro-input dealers in seven target countries (Nigeria, Malawi, Ghana, DRC, Tanzania, Kenya, Rwanda, and Mozambique) to facilitate development of catalogues of certified agro-dealers that can reliably supply quality seed to farmers. This effort resulted in development of a protocol for identifying accredited and genuine seed suppliers and agro-dealers to facilitate the delivery of technologies at scale by other TAAT commodity compacts. Importantly, the Enabler facilitated development and dissemination of catalogues of accredited agro-input dealers in Nigeria, Tanzania, Malawi, and Benin where over 100 seed companies and close to 5,000 accredited agro-input dealers were listed.

At regional level, the compact collaborated with RECs secretariats (COMESA, EAC and ECOWAS) to convene high-level consultative workshops in support of harmonisation of regulations for testing, release and registration seed and other agro-inputs. The workshops aimed at assessing the status of implementation of regionally harmonised regulations for seed and pesticides, identifying the implementation challenges and developing costed action plans for accelerating implementation of harmonised instruments. During these regional engagements, several accomplishments were realised including:

- Two regional policy dialogue events organised in COMESA and ECOWAS regions, attended by over 90 per cent of the member states in both cases. During these meetings, the participants who included representatives of governments, private sector, and development partners, assessed the current status of domestication and implementation of the regionally harmonised seed regulations, and developed an action plan towards accelerating the implementation process. Through the consultations and follow up with national stakeholders, Egypt became the latest COMESA member state to domesticate the regionally harmonised seed regulations, bringing to eight the number of countries in the region that have fully domesticated the instrument.
- The ECOWAS Regional Quarantine Pest List was developed, validated, and adopted as a strategy to enhance and facilitate the process of border control for seeds exported across the region. This effort aims at facilitating regional trade in ECOWAS region.
- The ECOWAS Regional Variety Catalogue on Crop Varieties (rice, maize, sorghum, millet, groundnut, cowpea, cassava, yam, and potatoes) which was last updated in 2018 was updated in 2021, with 176 additional varieties. A similar effort on updating the regional variety catalogue in COMESA region is currently underway.
- In the EAC region, the enabler leveraged on parallel project activities to provide technical assistance in support of regional harmonisation of guidelines and protocols for testing and registration of pest control products. Significantly, this effort resulted in the adoption of 'Regionally Harmonised Guidelines for Testing and Registration of Pesticides' by the EAC Council of Ministers in 2019.

Expected Impact

- Emergence of functional national seed systems in African countries.
- Policies for deployment and adoption of food production technology policies harmonised across a region.
- Improved cross boundary movement of seeds and agricultural products.
- Competitive commodity value chains to drive adoption of technology.

Key Challenge

- Budget cuts within the TAAT program and spreading of year 1 budget to cover three years of the program.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
OBJECTIVES AND ACTIVITIES (CONTINUED)**

Mitigation: Tapping into AfDB country leveraged funds as well as roll-over of activities to TAAT II.

ENHANCING ACCESS TO IMPROVED AND AFFORDABLE SEEDS THROUGH THESEEDS2B/PASTTA PROJECT

The Seeds2B initiative applies a market-oriented approach to facilitate transfer of seed technologies from research programs to seed enterprises through a process of technology scouting and discovery, variety performance data collection and analysis, product registration and promotion. The project's purpose is to develop and implement scalable business models that will enable technology donors across the globe, from the private and public sector, to license appropriate improved crop cultivars to seed companies for out-scaling and uptake by farmers in SSA.

AATF Interventions

The Seeds2B project was initially executed by AATF in Malawi and Zimbabwe, where selected varieties which matched the target profiles for each crop were evaluated against local checks to assess their adaptability. Outstanding varieties from the adaptation trials were released and licensed to private seed companies for commercialisation and out scaling for wider access by farmers. This has since expanded to encompass additional components i.e., Partnerships for Seed Technology Transfer in Africa (PASTTA) to include Uganda; and the Ghana Agricultural Technology Evaluation (GATE) to operate a systematically coordinated, and independent professional variety evaluation service that showcases the performance of improved vegetable varieties bred by both public and private breeders to enhance smallholder farmer access and adoption of improved varieties in Ghana.

Achievements

The Seeds2B Project identified four crop value chains - tomato, millet, sorghum, and soybean that were economically feasible for commercialisation in Zimbabwe in line with the project objectives. Independent trials were conducted by both national and multinational seed companies. The trials were implemented in the field stations of the companies and on farmers' fields. The companies evaluated top varieties of sorghum, pearl millet and tomato hybrids identified for their promising performance from earlier trials conducted in the project.

The small-scale (pre-commercial screening) trials conducted were aimed at identifying high potential commercial leads selected for good field performance and high market demand. In line with the project scheme and local seed regulations, the identified commercially viable cultivars from the small-scale trial (SST) were nominated for medium-scale (pre-commercial registration) trials to meet regulatory variety release and registration requirements. SSTs were done over two cropping seasons while the medium-scale trials (MST) are typically implemented over three consecutive seasons. Local seed enterprises were engaged within the project to select their most preferred commercial leads after one season of independent seed company trials.

In Malawi the project conducted a series of activities including advanced yield evaluation and on-farm trials for soybean, groundnuts, cowpea, tomato, and pigeon pea varieties. Two outstanding varieties of groundnut and eight of soybean varieties were released and are now being commercialised in collaboration with the private sector. At present 70MT of pre-basic seed for the released varieties of soybean and groundnut varieties have been produced and distributed to seed companies for multiplication and bulking of certified seed.

In Uganda, the project has registered and is currently commercialising 10 new varieties (two for bean, three for soybean, two for tomato and three for groundnuts). Multiplication of early generation seed and marketing trials for the released varieties of beans and groundnut varieties are ongoing. More than 387.84MT of seed has been commercialised and accessed by farmers.

In Ghana, a total of 67 new improved varieties of tomato, pepper and onion were accessed and evaluated. The varieties were sourced from local and international seed companies and evaluated on-station and on-farm in the country's four agro-ecological zones. Further demonstrations of the commercial value of the improved varieties will have to be conducted to reach more districts/zones. The aim was to enhance farmers knowledge of the varieties and for them to be better equipped and empowered to make the best choices of available vegetable varieties in the market to achieve higher economic returns and to improve livelihoods.

So far, the project has reached more than 621,202 farmers through product promotions, training, and field days.

Expected Impact

- Training on intellectual property (IP) and licensing in the seed sector enhance the capacity of industry players on technology transfer and IP management in the seed sector for sustainability.
- The adoption of improved crop varieties results in improved yields, increased household income and nutrition, better livelihoods, and food security for African farmers.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
OBJECTIVES AND ACTIVITIES (CONTINUED)**

- Strengthened African seed systems through increased competition, better quality seed, higher volumes, stronger market linkages and increased income/profits fostering a virtuous circle of investment in African seed companies.

Challenges

- Variety release meetings are not regularly scheduled leading to significant delays in the release process.
- The COVID-19 guidelines and movement restrictions caused delays and curtailed implementation of some activities resulting in challenges in data collection and monitoring.
- Increased incidence of floods as well as elevated disease and pest pressure occasioned by effects of climate change negatively affected trial outcomes. Engagement of trial partners with irrigation capacity and limited trial establishment during affected seasons were strategies applied to manage associated risks.

VEGETABLE SECTOR ASSESSMENT TOWARDS ENHANCED CLIMATE RESILIENCE IN THE VEGETABLE VALUE CHAIN IN ESWATINI

The objective of this AfDB funded project is to provide support to the design and implementation of adapted vegetable, digital and data-enabled technologies for enhanced climate resilience in the vegetable value chain that can be mainstreamed into the Lower Usuthu Smallholder Irrigation Project (LUSIP) and Mkondvo-Ngwavuma Water Augmentation Project (MNWAP).

AATF Interventions

AATF conducted a seed sector industry survey where key stakeholders including farmers, traders, manufacturers, government officials, research and seed companies were interviewed. The data collected was analysed and a report generated. The recommendations from the analysis will enable seed sector stakeholders in Eswatini to have a better understanding of the existing impacts of climate change in vegetable production; increase awareness on the need to invest in digital and data-enabled technologies for increased climate resilience; and enhancement of productivity, identification of digital and data-enabled technologies for enhanced climate resilience in the vegetable value chain that can be mainstreamed into LUSIP and MNWAP by AfDB.

Achievements

The assessment identified critical information that will support the Eswatini government and vegetable sector stakeholders in climate change adaptation and building resilience to the negative impacts in the sector. The analysis of the assessment developed eight recommendations from the study which pointed out key thematic areas and actionable climate change resilience activities to be implemented in Eswatini.

These thematic areas include:

1. Reform in government policy/legal frameworks on impact of climate change and strategy for action.
2. Physical infrastructure investment in the vegetable sector such as irrigation systems and storage coolers.
3. Extension (capacity building for farming as a business).
4. Digital tools (data collection, analysis, and modelling) to assist farmers in predicting weather patterns for decision making in vegetable production.
5. Climate Smart Agriculture (CSA) Technologies: The use of digital tools in increasing crop productivity.
6. Financial services such as credit for capital and inputs.
7. Market linkages.
8. Gender and social inclusion.

Expected Impact

The proposed interventions will lead to increased access to and sustainable use of climate smart production packages to enhance productivity and incomes among vegetable farming communities in Eswatini.

Challenges

Access and use of digital technology in the vegetable value chain in Eswatini is significantly low. Therefore, there is need to invest more resources in knowledge dissemination, acquisition, and use of these technologies in building resilience and adoption in tackling the negative impact of climate change in the sector in Eswatini.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
OBJECTIVES AND ACTIVITIES (CONTINUED)**

GENDER AND YOUTH EMPOWERMENT

Background and Introduction

AATF has a Gender Strategy to ensure that projects, governance, and the institutional framework are gender responsive at all stages of design, planning, implementation, and monitoring and evaluation of agricultural technology research and development. AATF is making deliberate efforts to include gender mainstreaming into its projects to ensure equitable access to the opportunities and benefits its projects and institutional development efforts offer.

AATF Interventions

There was a major focus on gender mainstreaming across all AATF projects during the reporting period. A gendered market study of hybrid maize adoption was conducted in Nigeria to facilitate the successful commercialisation of AATF's TELA maize products alongside other ongoing activities. The study will guide decisions to influence and design impact pathways for better outcomes which could be leveraged by AATF's resource mobilisation team through development of proposals that are structured to address gender gap related challenges.

Summary of Achievements

- AATF rolled out a gendered market study of hybrid maize in Nigeria to facilitate successful commercialisation of TELA maize products by ensuring that they are demand-driven, market preferred, and developed to fit the needs of identified value chain actors. The assessment was designed to map out gender barriers along the hybrid maize value chain and the underlying causes that may hinder equitable access to the opportunities and benefits associated with hybrid maize adoption including user's willingness to pay. The study results showed that more male than female and youth maize farmers benefit from the superior production inputs, and the education and technologies that are available for profitable maize production thereby achieving higher yields compared to women. However, the yields being recorded at farm levels from both genders in selected states are still low. The mean yields of 2–2.5 t ha⁻¹ reported by male farmers and 0.5 t ha⁻¹ by female farmers in most states are lower than the global mean yield of ~ 5 t ha⁻¹ reported by earlier researchers. The lower participation of women compared to that of men at every stage of the maize production value chain might be due to the restrictions that the socio-cultural and religious orientations the society in northern Nigeria places on women that exclude them attending public engagements. These restrictions also exclude them from benefiting sufficiently from various programs and interventions that are designed to empower them and guarantee equitable access to productive resources together with their men counterparts.
- The proposed recommendations include sensitisation of local leadership including religious leaders on the need to have equal gender participation in various sectors of the value chain; promote mechanisation efforts in the maize value chain to increase efficiency and save time; and continuous sensitisation on the economic benefits of hybrid seeds to the farmers backed with good agronomic practices. AATF has conducted a constrain analysis and will be working on the recommendations in collaboration with the partners in Nigeria.

Expected Impact

To enhance gender mainstreaming across the AATF's maize and Pod Borer Resistant cowpea value chains.

INTEGRATION OF NUTRITION-SENSITIVE AGRICULTURE FOR REALISATION OF A HOLISTIC FOOD SECURITY APPROACH

There are almost 870 million chronically undernourished people, more than two billion people that are suffering from nutrient deficiencies, and more than one billion people that are either overweight or obese globally. Agro-food systems are predominantly aimed at food security and not nutritional security with more emphasis on grain production. Addressing food availability and access is critically important but may not have a measurable impact on nutritional status of the population unless more flexible and locally adapted systems that incorporate both food and nutrition security are in place. It is therefore recommended to adapt a Nutrition Sensitive Agriculture (NSA) approach which stresses on the multiple benefits derived from enjoying a variety of foods, while recognising the nutritional value of food for good nutrition, and its importance, and the social significance of the food and agricultural sector for supporting rural livelihoods. The overall objective of NSA is to make the global food system better equipped to produce good nutritional outcomes. Thus, the scope expands from merely producing enough calories but putting into consideration the vitamins, minerals and other micro-nutrients required for healthy living, environmentally sustainable food production, and food processing and utilisation to ensure that the food reaches the consumers in an optimal state. NSA takes a systems' approach that links sectors and intervention levels while aiming to deliver nutrient-rich, diversified, and balanced diets to all consumers throughout the year.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
OBJECTIVES AND ACTIVITIES (CONTINUED)**

Objective

To transition AATF's programs and projects from only focusing on food security through increased productivity and income, to improved nutrition security by making these programs and projects nutrition sensitive.

AATF Interventions

AATF is targeting PBR Cowpea as the first project for nutrition integration. To this end therefore, a formative study was scheduled to take place in four states in Nigeria to find out the key drivers of malnutrition, the barriers to nutrition interventions and to identify other organisations/players that are working on nutrition in these states in order to establish collaboration. The main objective for this study is to guide AATF to make well informed decisions on the appropriate interventions to put in place to improve the nutrition outcomes of PBR Cowpea farmers in Nigeria.

Summary of Achievements

1. AATF partnered with Tanager to understand the importance of mechanisation in cassava production in household nutrition, and how the time saved from the use of mechanisation (to avoid drudgery and inefficient time-consuming manual farm operations) is utilised and allocated in favour of household nutrition. The study showed that:
 - Time saved due to mechanisation allows for involvement of farmers in other income generating activities which leads to additional income that is used to access nutritious food.
 - Mechanisation has led to increased production and consumption of food grown by households as well as using income earned from selling surplus to purchase more diverse foods such as vegetable, fruits, and meat.
 - Women are spending the saved time on child-care and food preparation which in turn improves the nutrition status of the household.
 - Mechanisation has allowed female farmers to plant more diversified crops such as beans and vegetables.
 - There is need for AATF to support crop diversification and create awareness on the use of income from cassava to purchase other nutritious foods.
2. AATF together with Tanager conducted a lean data study with the objective to provide insights on how PBR cowpea is affecting the nutrition status of the households. The study was conducted through phone interviews involving extension agents, and farmers growing the crop. The outcomes of the study showed that:
 - Introduction of PBR cowpea slightly increased household consumption of the bean and its accessibility and availability for the households.
 - There is need for nutrition education especially on processing and proper storage of cowpea to prolong availability as well as reduce deterioration of the nutritive content.
 - Introduction of PBR cowpea increased household income, which is being utilised for domestic expenditure including the purchase of other nutritious foods such as fruits and vegetables as well as accessing health care services.
3. **Development of AATF Nutrition Integration Strategy**
A strategy was developed to provide guidance on how to integrate NSA objectives and indicators into existing and new projects and programs, and to put in place a monitoring and evaluation system, as well as a periodic reporting structure and creating accountability. The objectives of the strategy are as follows:
 1. Increase the production and consumption of diverse, safe, and nutrient dense foods by smallholder farmers.
 2. Accelerate adoption of NSA through awareness creation using social behaviour change communication along the agricultural value chains that AATF promotes.
 3. Create an enabling environment for food markets to enable accessibility of nutritious foods by smallholder farmer households in regions that AATF operates.
 4. Increase women and youth involvement in NSA activities in the regions that AATF operates.

Expected Impact

The executed activities and proposed planned actions are expected to improve the nutritional status and security of smallholder farmers in SSA through the adoption of agricultural interventions that are nutrition sensitive.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
OBJECTIVES AND ACTIVITIES (CONTINUED)**

BUILDING EDUCATION AND AWARENESS TO SUPPORT DECISION MAKING ON BIOTECHNOLOGY THROUGH THE OPEN FORUM FOR AGRICULTURAL BIOTECHNOLOGY (OFAB)

Objective

The objective of OFAB is to contribute to the creation of an enabling environment for the development, uptake, and adoption of agricultural biotechnology to address the challenges faced by smallholder farmers in Sub-Saharan Africa (SSA). OFAB facilitates constructive science-based conversations among stakeholders and decision-makers on agricultural biotechnology. OFAB convenes engagements between scientists, policymakers, and farmers to enhance confidence in the safety and benefits of modern biotechnology.

Specifically, OFAB:

- Establishes and manages a range of platforms to enhance understanding of biotechnology in agriculture for productivity.
- Contributes to informing policy decision-making processes on agricultural biotechnology by providing factual, well-researched, and scientific information.
- Forges strategic alliances for optimisation of resources through convening and encouraging inter-institutional networking and knowledge sharing in the agricultural biotechnology space.
- Enhances targeted capacity strengthening to improve communication across all sectors interested in biotechnology for African agricultural development.

The Problem

AATF established OFAB in recognition of the potential that biotechnology can offer towards agricultural development in SSA. However, the uptake and adoption of agricultural biotechnology is often derailed by negative perceptions and an unfavorable enabling policy environment. OFAB exists to facilitate active participation in the creation of an enabling environment for the adoption of new technologies by smallholder farmers. AATF believes that agricultural biotechnology is a critical technology that address some of the most critical food production stresses and could catalyse significant change in African agriculture. Africa, and in particular the SSA has the least developed infrastructure to facilitate research, development, and adoption of agricultural biotechnology in the world.

Achievements

OFAB is globally recognised as a credible biotechnology advocacy and influencing platform in SSA. It has built a global network to bolster its influencing and communication efforts in Africa. From one Chapter in 2006, OFAB has grown into a network of 10 chapters in Kenya, Nigeria, Ghana, Uganda, Burkina Faso, Tanzania, Ethiopia, Malawi, Mozambique, and Rwanda. Additionally, OFAB is a founding member of the Cornell Alliance for Science (AfS), a global initiative that champions support for science communication to improve perception and contribute to the development of effective policies for the advancement of science in development. OFAB has over the years trained over 600 journalists in science and fact-based reporting. It has been critical in advocating for an improved biosafety environment in all the OFAB chapter countries.

OFAB as AATF's advocacy platform has significantly contributed towards the creation of an enabling environment for biotech uptake in SSA. It has successfully engaged grassroots communities on the benefits and safety of genetically modified organisms (GMOs) through a sustained community mobilisation program in collaboration with relevant local bodies in target countries. OFAB chapters have facilitated the creation of 25 biotech information dissemination nodes which are units that mobilise people on the ground through education and awareness to improve perceptions and understanding of biotechnology. OFAB also raised additional funds to drive up its advocacy efforts at the grassroots and 'grass tops' (policy advocacy) by leveraging on resources from partner institutions to expand outreach and engagement.

As part of its high-level policy outreach activities, OFAB held a high-level conference on biotechnology in October 2020 in conjunction with AUDA-NEPAD, where a joint work plan and call to action were developed. Implementing the action plan and communique led to AATF and AUDA-NEPAD, holding a second science, technology, and innovation (STI) conference in conjunction with the Government of Rwanda in 2022 in Kigali, Rwanda to track the progress Africa is making on science and agriculture. This event brought together several high-level policymakers, including prime ministers, ministers of agriculture, of science, technology, innovation and of education from Malawi, Uganda, Rwanda, Burkina Faso, Ghana, Nigeria, Ethiopia, Kenya, and Tanzania. The two conferences and the high-level roundtable together pooled over 800 policy makers and technology experts to discuss the future of STI in Africa.

OFAB's work with the media has increased biotech awareness and knowledge in the chapter countries. Complementing its work with the media, OFAB has since 2017 successfully held the annual OFAB Africa Media Awards (OMAS), which celebrates and recognises excellence in science journalism in Africa. The yearly media awards gala is conducted first at the country level and winners in three

AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021

TRUSTEES' ANNUAL REPORT (CONTINUED)
OBJECTIVES AND ACTIVITIES (CONTINUED)

categories - television, radio and print, and online from the chapters compete for the overall Africa-wide award that is held annually. OMAS has contributed to enhanced quality and frequency of media reporting on biotechnology in Africa. It has also at the same time built the capacity of journalists to understand the technology and improve evidence-based policies on agricultural biotechnology in the continent.

The current OFAB phase started in September 2019 and runs for five years and is focusing on:

- **Policy change:** Conducive policies and systems to allow environmental release and commercialisation of GM products in at least four SSA countries (Kenya, Uganda, Tanzania, and Burkina Faso);
- **Policy implementation:** Successful and sustainable implementation of policies and systems providing an enabling environment to support commercialisation of GM products in four countries (Ethiopia, Ghana, Mozambique, Nigeria) by 2024; and
- **Information sharing:** Sustained biotech awareness, information and knowledge sharing to build positive momentum in SSA.

Challenges and Lessons Learnt

- Political will (support) is critical for biotech adoption. AATF has therefore intensified high-level policy advocacy and communication campaigns to mobilise political goodwill and support for biotech through OFAB. Efforts are being made to enhance high-level outreach through engagements to build visibility and inclusion in decision making.
- There is need to intensify the use of local scientists to be the face of GM research and development in Africa to dissuade the perception that the technology is being pushed by foreign entities to subdue Africa's sovereign interests.
- Grassroots support for biotech is vital for two reasons: to boost the confidence of policymakers to support the technology and to back it up with science-based policies. AATF made a strategic decision to engage grassroots communities on the benefits and safety of GMOs through sustained community mobilisation programs through OFAB in Kenya, Uganda, Tanzania, Ethiopia, Burkina Faso, Ghana, and Nigeria. Information sharing at the grassroots has been instrumental in enabling the farmers to demand for biotech products which would address their farming challenges.
- The media's support for biotechnology is a strong booster of public acceptance of the technology. Proactive engagement and capacity strengthening of journalists on science reporting is helping to build informed and empowered reporters. The involvement of AATF project communications staff in advocacy has exposed them to a broader perspective on biotech and given them opportunities to communicate issues raised in outreach efforts to a wider public (masses) for awareness creation and transparency, i.e., confined field trials in Kenya, Uganda, Tanzania, and Mozambique.
- Advocacy is an expensive exercise that requires adequate resources to undertake and achieve desired results. As mentioned above, OFAB raised additional funds to increase its advocacy efforts at the grassroots and 'grass tops' (policy advocacy) levels. Efforts to raise more funding and leveraging of resources from partner institutions to expand its reach are ongoing. Advocacy also takes long, and success is not easy to realise in most countries.
- The anti-biotech movement has been globalised, and efforts to counter it ought to be globally networked as well, but with a strong local presence and action. OFAB has built a global network to bolster its advocacy and communication efforts in Africa. OFAB is also working on building partnerships and alliances, which are critical in addressing GMO adversarial efforts.
- To reduce public distrust of government institutions due to the history of compromise by its officials, AATF is encouraging them to engage with media more often to showcase their capacity to regulate GM technology. Endorsement of biotechnology by national and regional trade associations, and farmer organisations has also significantly helped to boost chances of GM technology acceptance.
- OFAB has learnt that there is need to change the GM narrative from defensive rebuttals to anti-technologists to developing offensive messaging based on scientific facts and the benefits to be accrued by farmers and the national economy and development. This has enabled the development of a narrative which addresses the negative perceptions perpetrated by anti-technologists while also disseminating the correct information on agricultural biotechnology.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
STRATEGIC REPORT**

The trustees present their consolidated report and audited financial statements for the year ended 31 December 2021, which disclose the company's and group's state of affairs.

Achievements and Performance

AATF has made tremendous progress against performance indicators which include strengthening its commercial pipeline, gender, and youth inclusion, achieving, and assessing impact at scale and financial sustainability. Building-up to the achievements reported in the objectives and activities section above, the following are highlights of the key achievements at an organisational level.

Scaling-up mechanisation and digital agriculture operations through Agridrive

Aggridrive Ltd, an AATF social enterprise, developed an innovative approach to mechanisation service provision by using digital technologies to link farmers to critical knowledge necessary to drive productivity and market gains for better income and livelihoods among farmers. In joint venture with AATF, Aggridrive has deployed drones to generate field data critical to field management practices and improved productivity. A total of 800 farmers were linked to AATF technologies using digital solution platforms.

Qualibasic Seed Company

Since inception in 2017, QualiBasic Seed Company (QBS) has sold 264 tonnes of maize foundation seed which is enough to plant 10,560ha of certified seed and produce 36,960 tonnes of certified seed. This certified seed is adequate to plant 1,478,400ha under maize and produce 4,435,200 tonnes of grain to feed over 73 million people. QBS is well recognised among its customers and other stakeholders including Bill and Melinda Gates Foundation (BMGF), the investor.

Launch of ECOBasic Seed Company Ltd

A key outstanding milestone in 2021 was the registration and launch of ECOBasicSeed Company (ECOBASIC) in Nigeria to address the challenge of availability of quality seed for farmers through production of early generation/foundation seed for seed companies. ECOBASIC will focus on West Africa as QBS continues to service the East and Southern Africa markets. With these two subsidiary entities, we expect to witness an increase in access and use of certified seed by farmers and to ease the production of quality seed by companies.

Enhancing capacity of seed companies in the commercialisation pathway of AATF products

As part of its core focus on strengthening the pool of technologies available to farmers, AATF and its partners released 11 new innovative products to the market in 2021 up from eight varieties released to farmers in 2020, despite the COVID-19 challenges that affected operations.

AATF continued with strategic engagements with private seed companies and conducted capacity building in several areas. A total of 2,246 value chain actors including seed companies were engaged in 2021 for various interventions.

Implementation of the AATF Strategy and Business Plan

As the AATF 2018-2022 Strategy enters its final year of implementation, the Foundation is elated at what the current results reveal and portend for the organisation's ability to make a difference to the continent's agriculture. The Foundation acknowledges several lessons that will inform the way forward as the organisation enters a new phase of another strategy. The current strategy is driven by three overarching strategic objectives including:

1. Strategic Objective 1: Diversify Agricultural Technologies Accessed for use in Sub-Saharan Africa

In line with its mission, AATF continues to inject agricultural technologies into African farming systems including building support systems to address farmer production constraints for better livelihoods and improved health and wealth. Through a demand-driven approach, AATF, working in partnership with technology donors across the globe, continues to prioritise game-changing agricultural technologies that would otherwise not have been accessible to resource-constrained farmers in SSA. In so doing it is championing the empowerment of smallholder farmers by facilitating their access to innovative technologies which are critical to modernising Africa's agriculture towards ensuring food and nutrition security for the continent.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
STRATEGIC REPORT (CONTINUED)**

2. Strategic Objective 2: Accelerate Commercialisation of Agricultural Technologies

Accelerating commercialisation of agricultural technologies, especially for high yielding and adaptable crop varieties with compelling traits to improve livelihoods of smallholder farmers, is at the epicenter of the current AATF strategy. The adoption of AATF technologies which range from improved seeds of high yielding varieties to mechanisation and digital agriculture, when complementarily combined in a holistic approach, will offer a strong pathway to increased food and nutrition security – leading to the transformation of African agriculture and economies. This strategic objective primarily focuses on efforts and activities that are geared towards facilitating efficient market systems that pragmatically respond to demand and supply of AATF technologies. It ensures that smallholder farmers have access to these technologies and the necessary farming inputs required to stimulate optimum productivity on-farm.

3. Strategic Objective 3: Create an Enabling Environment for Increased Uptake and Use of Agricultural Technologies

A supportive and enabling policy environment comprising policies, institutional arrangements, markets, and other support services are essential for developing, testing, deployment and adoption of productivity enhancing technologies and innovations that are expected to drive agricultural transformation in Africa. AATF works with public and private sector partners and stakeholders to address policy and regulatory bottlenecks including market failures affecting the introduction of agricultural technologies to markets and farmers in Africa. These efforts by AATF and its partners encompass rapid assessment of the policy environment governing agricultural inputs at country and regional levels, in addition to knowledge sharing, capacity strengthening and targeted advocacy engagement of stakeholders to catalyse desirable reforms.

Conclusion: AATF's achievements in 2021 confirm the organisation's resolve to continue transforming livelihoods in SSA through innovative agricultural technologies. In 2021, AATF directly reached over 4 million farmers who accessed its seed-based technologies, with expectation that the number will increase given the [encouraging farmer testimonials](#) on the value addition and life impacting experiences with regards to products from our partnerships. AATF reached an additional 19.4 million people through advocacy, outreach, and regulatory interventions that imparted knowledge, understanding and various forms of capacity strengthening to facilitate the growth of an enabling environment for the development and adoption of innovative technologies.

Reach/Scale of AATF Products

The development of the institutional results framework has been a critical success factor in linking projects activities to institutional targets in the strategy. Projects such as PBR Cowpea, OFAB, TELA, and TAAT have made good progress. AATF will continue putting systems in place to maintain high standards to ensure projects meet their required targets and support institutional improvements.

Resource Mobilisation

The number of proposals submitted has largely been maintained - 17 proposals Year-To-Date (YTD) in comparison to previous years. The YTD approval rate has increased from last year's 29 per cent versus 26 per cent in 2020. The value (amount applied for) of the proposals submitted has significantly reduced. YTD income raised is approximately \$4.5M including \$2.7M for QBS's 3-year extension.

Financial Review

This financial review incorporates the charity's subsidiaries namely Qualibasic Seed (QBS) Kenya Ltd, Agridrive Nigeria Limited and ECOBasic Seed Company Limited. The subsidiaries' details have been explained in the disclosures below as well as in the notes to the accounts.

AATF works to address some of the obstacles to technology access and delivery across the food value chain from research, production, processing through to market linkages. A priority area is to improve Africa's seed system where one bottle neck is foundation seed. In 2017, to address this bottleneck, AATF established and is currently incubating a foundation seed company called QBS with the support of the Bill and Melinda Gates Foundation (BMGF). This will help to mitigate the problem of foundation seed supply, a vital missing link in the maize seed value chain in most Sub-Saharan African (SSA) countries. Currently AATF is holding the shares in trust with the agreement to divest them to future shareholders. In 2021, a review to determine the optimal capital investment and shareholding aimed at having the seed companies (current QBS customers) become the majority of the new shareholders, was completed. However, with agreement from the QBS Board and BMGF, the actual process to solicit and bring new shareholders on board was postponed to allow QBS to complete more business cycles and to improve on performance. To support this, BMGF extended their grant to December 2024. The discussion of the optimal shareholding structure is ongoing with planned valuation of the company sometime in 2023. However, the actual transition will take place between 2023 and 2024.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
STRATEGIC REPORT (CONTINUED)**

Agridrive is a social enterprise incorporated in Nigeria and Kenya in February 2018 as Agridrive Nigeria Ltd and Agridrive Kenya Ltd respectively. They are both owned 100% by AATF. The purpose of Agridrive is to engage in various commercial ventures in the agricultural sector for transformative agriculture development. It operates as a separate and distinct legal entity from AATF. However, some of the profits generated by the company will be re-invested back into AATF's not-for-profit work to ensure support and sustainability of the Foundation's institutional mission. Agridrive's first business venture is mechanisation services in Nigeria. Building on the work with the Cassava Mechanisation and Agroprocessing Project (CAMAP), Agridrive offers ploughing, harrowing, planting, herbicide application and harvesting services to farmers on a commercial basis across various crop value chains. Agridrive Kenya Ltd did not have any trading activities in the current reporting period.

Based on the successes of QBS, AATF incorporated another foundation seed company known as ECOBasic Seed Company Ltd. The company was incorporated in Nigeria on 17 August 2021 as a private limited liability company and commenced operations in September 2021. It was officially launched in November 2021. The company was created to address the challenge of availability of quality seed for farmers and production of early generation/foundation seed for seed companies. ECOBasic will focus on West Africa as QualiBasic (QBS) continues to service the East and Southern Africa markets. With these two subsidiary entities, we expect to witness an increase in access and use of certified seed by farmers and to ease the production of quality seed by companies.

Two of the subsidiaries, QBS and Agridrive posted net losses after tax, whereas ECOBasic posted minimal profit during the year. This was expected for these start-ups since their break-even points were projected to be between five to seven years. QBS and ECOBasic are supported by donor funds i.e., BMGF and therefore do not expose the Foundation to any significant financial risk. The initial grant from BMGF to QBS came to an end on 31 December 2021 but was extended on a cost-extension for an additional three years to allow the subsidiary's operations to crystallise and hence break even. The charity continues to provide incubation support and advisory to the subsidiaries aimed at ensuring that their revenues improve further hence resulting in reduced deficits and posting of surpluses in subsequent years.

AATF ownership structure in these subsidiaries is highlighted in the notes to the accounts.

Financial Review - Charity

Total income and endowments attributable to the charity for the year under review increased by 9% from US\$15.74 million in 2020 to US\$17.09 million in the current year. The amount of donations and legacies increased to US\$15.24 million up from US\$14.37 million in the prior year hence translating to a 6% increase. Investment income increased by 38% as compared to the previous year. The increase in donations and legacies was majorly due to higher grant receipts for Open Forum on Agricultural Biotechnology (OFAB) and QBS projects compared to the prior year. The later was due to the extension of the project for an additional three years, hence increased grant amount in the current year as compared to the prior year.

Grants from BMGF increased by 28% from US\$8.23 million in the prior year to US\$10.53 million in the reporting period but remained as the highest grantor to the Foundation. The increased funding from BMGF in year 2021 can be attributed to a better portion of QBS funds for the new three-year grant having been disbursed in the current year. There was 218% increase in the amounts disbursed for the OFAB project in the current year as compared to the prior year due to the increase in project activities as compared to 2020. There was continued support from all past investors.

Financial Review – Group

Total income and endowments for the year under review increased by 7% from US\$16.30 million in 2020 to US\$17.39 million in the current year. The amount of donations and legacies increased to US\$15.24 million up from US\$14.39 million in the prior year hence translating to a 6% increase. The group recorded a net operating income after tax for the year ended 31 December 2021 of US\$2.32 million against net income after tax of the prior year of US\$1.61 million. Group expenditure increased marginally by 3% to US\$15.72 million as compared to US\$14.69 million in the previous year.

QBS net loss after tax increased by 113% as compared to 2020 due to decreased revenues and other operating incomes which decreased by 23% and 66% respectively as compared to the prior year. Agridrive net loss after tax increased by 83% as compared to the prior year primarily due to decline in revenues by 48% and an increase in finance costs and income tax expenses by 10% and 15% respectively. ECOBasic Seed Company which commenced operations towards the end of the reporting period, posted a low net profit after tax of \$251.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
STRATEGIC REPORT (CONTINUED)**

Key Performance Indicators for the Board of Trustees

The key performance indicators for the board of trustees as stipulated in the board manual are as follows:

- Timeliness in providing the policy decisions needed by management.
- Ensure adequacy of documentation for decision making and ensure allocation of adequate time to consider major issues in Board and Committee meetings.
- Quality and openness of discussions.
- Quality of decision making.
- Adequacy of planning to ensure continuous high-quality leadership for the board and its committees.
- Appropriate board composition for board functions associated with the oversight of both program and management.
- Appropriate committee structure.
- Adequate orientation for new trustees.

Principal Funding Sources

During 2021, AATF continued to receive considerable support from members for programs across Africa. In addition, strong internal policies and controls have contributed to maintaining administration costs at reasonable levels. While AATF's focus is on SSA, it nevertheless offers the prospect and potential for its activities to benefit a wide range of stakeholders worldwide. AATF facilitates partnerships and networks that link food security, poverty reduction, market development and economic growth in ways that will change the conventional approaches employed by African producers engaged in agri-business, to make these activities sustainable over time.

Going concern

The financial statements have been prepared on the going concern basis, which the trustees consider to be appropriate in the context of the Charity's ability to meet its obligations as they fall due in the period of 12 months following the date of approval of these financial statements. This assessment is based on the fact that all the major investors continue to fund the activities of the Charity. Currently majority of the projects have multi-year funding commitments. The overall cashflow situation of the Charity is expected to remain stable and based on the latest cashflow forecasts, it is estimated that the organisation will have cash and cash equivalents to the excess of US\$13 million, a year from the date of this report. This represents approximately 74% of our annual average budgets.

The trustees regularly review the medium and long-term financial position of the Foundation and the group, including its current and predicted future cash flows. The COVID-19 pandemic spread rapidly in 2020, with a substantial number of infection cases globally. Measures taken to contain the virus such as restricted movements significantly affected economic activity at a global scale. This impact, however, is more on the management of programme activities and not on the financial health of the Foundation. The management has considered the consequences of the pandemic and other events and conditions, and it has determined that they do not create a material uncertainty that casts significant doubt upon the entity's ability to continue as a going concern. There are also no indications that the effect of the pandemic has any significant impact on the results for the current reporting period.

During the 2020 financial year, the trustees gave considerable attention to the outlook of the Foundation and the group with a more rigorous financial modelling than usual on a range of post COVID-19 scenarios. This prompted the development of an 'AATF Response to COVID-19 Plan'. Short and medium to long term interventions have been identified in line with AATF's strategy to mitigate the effects of COVID-19. The measures include intensification of existing interventions; and introduction of new ones which are the majority. These interventions will be packaged in line with any donor calls or interest as AATF looks for additional funding to implement them.

The substantive 2022 budget presented and approved by the board in May 2022 meeting shows that total expected income will equal the projected expenditure hence the Foundation is expected to operate at zero surplus/ deficit level. The Foundation is aware of COVID-19 possible impacts on a going concern, financial instruments, business interruption and possible delays in achieving targets. Having carried out this in-depth exercise and reviewed the outputs at board meetings, the trustees strongly believe that the Foundation is doing well despite the challenges posed by COVID-19 as reflected in the resources pipeline. The Foundation has a reasonable level of liquid resources buttressed by new grants provided by Bill and Melinda Gates Foundation in November 2020 for a period of five years as well as another USAID grant for TELA and Cowpea projects that ends in 2023. In addition, the Foundation received a 14 months' extension from BMGF for the TELA project and another 7 months extension for its EGS project. Therefore, after taking into consideration the funding commitments and the cash flow position, the trustees have a reasonable expectation that the Foundation and the group have adequate resources to continue in operational existence for the foreseeable future of a minimum of 12 months from when these financial statements are approved. Accordingly, they continue to adopt a going concern basis in preparing these financial statements.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
STRATEGIC REPORT (CONTINUED)**

Investment Policy

AATF's objective is to maximise the return of its investment funds while generating a high degree of liquidity to enable a response to operational needs. To meet this objective AATF invests in fixed term or call deposits with a high security rating and either fixed interest rates or with a fixed relationship to base rates. Our interest rate is of course lower than what the market can offer due to our cautiousness on ensuring capital protection. During the year, there was no equity investment held by AATF. The board of trustees reviews AATF's investment policy annually.

Reserves Policy

The trustees have examined the requirement for free reserves. These are unrestricted funds that are neither invested in fixed assets designated for specific purposes nor otherwise committed. The policy objective is "to maximise the programme impact to beneficiaries and maximise the value of net income". The trustees consider that given the nature of AATF's work, ideally the general reserve should preferably be in surplus, which gives flexibility to cover temporary timing differences for grant claims, adequate working capital for our core costs and allows it to respond quickly to unexpected situations. As at 31st December 2021, unrestricted reserves for the group stood at US\$7.60 million (2020: US\$7.89 million). The group had a total of US\$2.46 million (2020: US\$2.57 million) worth of fixed assets, intangible assets and biological assets, hence remaining with free reserves of US\$5.14 million (2020: US\$5.32 million). The charity had unrestricted reserves amounting to US\$6.81 million (2020: US\$6.76 million) and fixed assets of US\$0.04 million (2020: US\$0.04 million), hence free reserves of US\$6.77 million (2020: US\$6.72 million). Free reserves were invested in financial instruments, in form of fixed and call deposits, in order to increase internally generated income. The trustees review the reserves policy on an annual basis in light of the new strategic policies and future commitments.

As per the AATF Finance Manual, the Foundation "will maintain a general cash reserve equivalent to at least four months of annual budget unless explicitly authorised by the board to operate on a lower reserve level". The 2021 approved budget by the board was US\$19.78 million hence the minimum total reserves to maintain is US\$6.59 million. As at the end of the reporting period, the charity had a fund balance of US\$21.58 million of which US\$6.81 million were unrestricted funds and the balance of US\$14.77 million being restricted funds. Free reserves stood at US\$6.77 million. Therefore, using the Foundation budget of 2021 as the base, we had surplus reserves of US\$0.18 million above the desired threshold of reserves (internally generated funds).

All AATF reserves are unrestricted and free upon which the Foundation can freely draw when necessary and particularly to cover:

- 1) Costs AATF will incur in case the organisation has to close down.
- 2) Seed money for AATF to continue funding new projects or initiatives not funded by donor restricted grants.
- 3) Cost of operating expenses incurred while waiting for funding.
- 4) Cost of operating expenses not covered by any restricted donors funds.

Donated Services

The trustees are grateful to Nigeria's Federal Ministry of Agriculture who provide office space in Abuja as part of their support to our work in the country. It is estimated that AATF makes savings amounting to over US\$18,000 on rent annually.

Remuneration Policy

All AATF staff pay is dictated by a salary survey that is conducted among comparators, funds availability and board approval. The survey is carried out every three years by an independent consultancy firm. The management presents the board with the results of the survey and suggestions of what is feasible taking into account the Foundation's budgetary situation. The audit committee of the board evaluates the survey results together with the management's proposal and makes its recommendation to the board for approval.

Trustees' Indemnity Insurance

AATF has granted an indemnity against liability to its trustees in respect of proceedings brought by third parties, subject to the conditions set out in the Companies Act 2006. Such qualifying third-party indemnity provision remains in force as at the date of approving the trustees' report.

Financial Risk Management

The Foundation's activities expose it to a variety of financial risks, including credit and the effects of changes in foreign currency exchange rates.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
STRATEGIC REPORT (CONTINUED)**

The Foundation's overall risk management programme focuses on the unpredictability of changes in the business environment and seeks to minimise their potential adverse effect on its performance by setting acceptable levels. Risk management is carried out by a committee made of staff from the organisation's finance, technical, and legal departments, and the Executive Director's office. A detailed analysis of the financial risk management for the year is described below.

Market Risk

(i) Foreign exchange risk

The Foundation receives its income (donations) mainly in US Dollars (US\$) and Great Britain Pounds (GBP). However, it incurs and pays for expenses in either Kenya Shillings (KES) or US\$. However, the Foundation's exposure to foreign exchange risk is minimal, and is mainly related to KES transactions. Invoices are settled in the currency in which they are received, hence minimal foreign currency gains/losses.

Balances held in currencies other than US\$ are as follows:

	<i>2021</i>	<i>2020</i>
	<i>US\$</i>	<i>US\$</i>
Cash and bank balances in KES	428,454	94,989
Cash and bank balances in GBP	9,472	40,212
Cash and bank balances in NGN	<u>191,950</u>	<u>224,375</u>
	<u>629,876</u>	<u>359,576</u>

(ii) Interest Rate Risk Management

The Foundation uses a fixed negotiated rate for both fixed and call deposits to avoid such risks related to floating rate.

(iii) Price Risk

The Foundation does not hold investments that would be subject to price risk; hence this is not relevant.

(iv) Credit Risk

The Foundation's credit risk is primarily attributable to its unexpended grants receivable. The credit risk on liquid funds with financial institutions is also low because the counter parties are banks with high credit-ratings.

The amount that best represents the Foundation's maximum exposure to credit as at 31 December 2021 was made up as follows:

	<i>Current</i>	<i>Past due</i>	<i>Impaired</i>
	<i>US \$</i>	<i>US \$</i>	<i>US \$</i>
Grants Receivable	1,164,171	-	-
Other Receivables	1,268,467	-	-
Cash and short-term deposits	<u>19,042,589</u>	<u>-</u>	<u>-</u>
	<u>21,475,227</u>	<u>-</u>	<u>-</u>

The amount that best represents the Foundation's maximum exposure to credit as at 31 December 2020 was made up as follows:

	<i>Current</i>	<i>Past due</i>	<i>Impaired</i>
	<i>US \$</i>	<i>US \$</i>	<i>US \$</i>
Grants Receivable	955,421	-	-
Other Receivables	759,596	-	-
Cash and short-term deposits	<u>17,153,247</u>	<u>-</u>	<u>-</u>
	<u>18,868,264</u>	<u>-</u>	<u>-</u>

AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021

TRUSTEES' ANNUAL REPORT (CONTINUED)
STRATEGIC REPORT (CONTINUED)

Liquidity Risk Management

Ultimate responsibility for liquidity risk management rests with the board of directors through the senior management of the Foundation. The management has built an appropriate liquidity risk management framework for the Foundation's short, medium and long-term funding and liquidity requirements. The Foundation manages liquidity risk by maintaining banking facilities through continuous monitoring of forecast and actual cash flows.

The table below analyses the Foundation's financial liabilities that will be settled on a net basis into relevant maturity groupings based on the remaining period at the balance sheet date to the contractual maturity date. The amounts disclosed in the table below are the contractual undiscounted cash flows. Balances due within 12 months equal their carrying balances, as the impact of discounting is not significant.

	<i>2021</i>	<i>2020</i>
	<i>US\$</i>	<i>US\$</i>
Payables	<u>1,165,207</u>	<u>1,366,660</u>

Strategy and Plans for Future

AATF 2018-2022 Strategy entered its fourth year of implementation in 2021 with remarkable accomplishments. At the onset of the current Strategy, AATF committed to reach 16 million farmers and, by close of 2021, had reached over 20 million farmers, surpassing the five-year target. With over 4 million farmers having tried and accessed our seed-based technologies, expectation is that the number will increase by the end of the strategy. This means that by 2021 AATF had already surpassed the 16 million farmers/stakeholders targeted under the current institutional strategy (2018-2022). AATF anticipates reaching more farmers and stakeholders before the end of 2022.

The development of the next phase of the Strategy and Business Plan for 2023-2027 is currently underway and is expected to end by December 2022. The strategy will consider different elements to build AATF's value proposition. This will include needs of African farmers; priorities of governments, partners, and donors; and AATF's comparative advantage. The new strategy will build on the experiences gained in the last phase, taking into consideration current global trends in the agriculture sector.

In shaping the objectives and planning the activities of the charity, the trustees have considered the Charity Commission's guidance on public benefit.

Major Risks

The major risks to which the charity is exposed to (managing existing potential liabilities) have been identified and reviewed by the trustees. The production and use of genetically modified organisms (GMOs) can create many potential liabilities. The producer or user of GM crops may be liable for the damage they cause to the person or property of another person or to the environment. Pollen flows from transgenic to non-transgenic crops cause damage. For instance, transgenic pollen flow may ruin the "organic" status of crops or the purity of the genetic material of other seeds. Questions may arise as to whether transgenic crops or their food products are toxic, allergenic or pose a long-term health threat. Claims for compensation in actions for personal or property damage could be based on a theory of negligence, trespass, nuisance, or strict liability.

The producer or user of GMOs may also be liable for infringement of intellectual property (IP) rights. This liability might even extend to farmers whose crops are accidentally affected by the presence of GMOs as a result of pollen flow or seed comingling.

A full risk register is updated annually, and the audit committee of the board reviews it twice a year. While all risks are taken seriously, the board and management have identified the following to be the most critical risks:

- Reduction or loss of funding; and
- Failure of subgrantees to comply with agreements.

The root causes were identified, and mitigating measures put in place.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
STRATEGIC REPORT (CONTINUED)**

The charity has instituted the following systems or procedures to manage those risks:

- The charity ensures compliance with IP, license and regulatory requirements for its projects. It adopts appropriate scientific and technical safeguards for all GMOs and advises stakeholders, including smallholder farmers as to their appropriate use.
- The charity uses indemnification clauses in its contracts with collaborative institutions. Indemnification is a promise, usually contractual, to protect a party from financial loss.
- The charity also uses warranty disclaimers in its contracts with collaborative institutions. A warranty, either express or implied, is a guarantee that a particular product or technology will serve a specified purpose.
- A letter of non-assertion is another risk mitigation measure available to the charity that assures the user that the technology owner will not enforce their IP rights.
- The use of technology and product stewardship procedures including comprehensive risk analyses for projects and/or project phases, appropriate risk-mitigation strategies (including appropriate insurance coverage, outlining specific uses for technology, management and oversight protocols, procedures to protect confidential information, etc.), and compliance with all applicable laws.

We do recognise, however, that the nature of some of AATF's work in marginalised areas of Africa often affected by extreme poverty and conflict requires active acceptance and management of some risks in undertaking activities to achieve its objectives. The global COVID-19 pandemic has a potential risk to the operations of the charity and the group and the management has taken action to track, monitor and mitigate its effect on the performance as enumerated below.

COVID-19 pandemic

Background

The analysis shows that the short-term effects of COVID-19 will come from the containment measures instituted by governments including lockdowns. This has resulted in massive closure of businesses, and loss of jobs and income. This has also affected the demand for agricultural produce from the rural areas. In addition, transport and logistics disruptions of agricultural commodities have also affected supply, which has led to interruptions in inputs and difficulties in accessing markets, due to movement restrictions and border closures. This is already threatening the livelihoods of small-scale farmers. The implication of this has been reduction in revenue for smallholder producers due to shrinking demand and disruptions in supply mechanisms. There is also a likelihood of increased post-harvest losses due to reduced market opportunities. Reversing these losses will need interventions that will support the sustainability of production systems (FARA, May 2020). Further, there are limited extension services except for the skeletal visit-and-train system. Farmers and processors are left without field demonstrations. Many seed companies have cancelled annual meetings with farmers as they do not have the means to hold them virtually and to make online purchases. For example, in Mali the process of certification and provision of seeds to be distributed to producers of certified seeds will be delayed this year. This will lead to unavailability of seed for certified seed production by individual farmers, associations, and cooperatives (ICRISAT, June 2020).

The pandemic has the potential to distract stakeholders from addressing pre-existing threats, such as change in climate and in ecological dynamics. It may also reduce focus on long term strategies to embrace innovative technologies. With countries focusing all the attention to the crisis, they are bound to be diverted from long-term strategic goals such as the Comprehensive Africa Agricultural Development Program (CAADP) and the SDGs. This may cascade into unintended negligence of existing threats to food and nutrition security. For example, the first quarter of 2020 saw the number of malnourished people around the world rising due to conflicts and climate change particularly in the Sahel region. In addition, the ongoing threat posed by desert locusts in East Africa remains real as swarms have been projected to grow later in the year (FARA, May 2020).

There is no doubt that the effect of COVID-19 will have an impact on AATF's vision and mission. AATF's 5-year strategy (2018-2022) strives for food and nutrition security resulting from increased adoption of commercialised technologies by farmers with 20 per cent increase in yields and of 15 per cent in incomes. In order to still achieve these targets AATF is planning to implement the following interventions:

1. **Diversify Technologies and Accelerate Commercialisation:** fast-tracking mitigation of food shortages and extending storability of food commodities

Short term interventions:

- TEGO maize has high-yielding short season seeds, including drought tolerant crop varieties that can be planted under constrained conditions brought about by COVID-19. The yield advantage can be promoted and disseminated in the target Water Efficient Maize for Africa (WEMA) countries, and in additional ones. However, extra funds are required to cover the additional countries.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
STRATEGIC REPORT (CONTINUED)**

- To improve access to seed and other inputs such as pesticides and fertilisers, AATF plans for its projects to create linkages with input suppliers and negotiate subsidised prices to support farmers get adequate yields. This will be done first for cassava/CAMAP/AgriDrive in Nigeria, Uganda and Zambia, followed by Seeds2B project countries of Uganda, Malawi and Ghana.
- AATF will promote digital extension and advisory services, online payments and fund transfers, and virtual learning platforms.
- Linking technology adoption with financial incentives.

Medium to long term interventions:

- Scaling food-bulk storage technologies to conserve harvests (storage infrastructure is lacking systematic maintenance and functionality).
- Nutrition enhancing commercialisation strategies: Technology roll-out will give attention to nutritional issues and post-harvest technologies viz., the processing and storage techniques and facilities will need to comply with human nutrition requirements and safety standards.

2. Creating an Enabling Environment: Promote sustainable food supply systems, trade and labour markets in the agri-food sector
Short term interventions:

- AATF will promote SeedAssure - the digital seed certification and quality assurance scheme to improve efficiencies and to limit face to face interaction and travel. This will also improve access to national and international markets as it becomes easier to understand what is required and to adhere to required standards (this will be scaled up to two additional countries with a required investment of US\$250k per country).
- AATF will also promote the Samawati Compliance E-Notebook which ensures compliance with project collaboration agreements in terms of governance, biosafety laws and stewardship plans.
- Advice policy makers and governments in general on evidence to support policy on various incentives to enable food affordability such as zero VAT rating, elimination of customs duties and other taxes on basic food items, incentives on energy inputs (e.g., diesel rebate, investment into renewable energy etc).
- Review of phyto-sanitary systems to facilitate access to essential foods, such as, advanced pest risk analysis, and harmonised regional regulatory systems for transboundary trade, among others.

Medium to long term interventions:

- Develop agribusiness capacity for processing, storage, logistics and wholesale functions, within African countries, to increase incomes, employment and improve resilience to global shocks in the medium to long term.
- Stronger focus on value addition within Africa to increase inter-regional trade and contain price fluctuations.
- Promotion of e-market/traceability and pack houses to mobilise produce from producers, store and make necessary preparation for marketing.
- AATF will continue to advocate for the addressing of pre-existing threats, such as climate change, locust invasions and change in ecological dynamics, as well remind the countries to focus on long term strategies to embrace innovative technologies.

While AATF is taking the necessary measures to respond to COVID-19 impact, the Foundation financials will not be impacted. Rather the cash flow will be high due to reduced expenditures while the revenue will be stable. The Foundation will be able to meet its financial obligations for the current year 2021 and the next year 2022 and maybe beyond.

Risk Management

In addition to the risks mentioned above, the board of trustees reviews AATF's key risks regularly as part of the monitoring process. This review, combined with that of key financial controls and other operational systems carried out through a structured audit program of each country of operation, have, in the past, provided AATF with adequate risk assurance. However, a more comprehensive mechanism to manage the operations of AATF has been incorporated in the new monitoring and evaluation system known as "AATF Monitoring Evaluation, Learning and Improvement and Align (AMELIA)". AATF has a dedicated Regulatory Affairs Unit in charge of technological risks. Through this mechanism, risk mapping, analysis, and mitigation processes are carried out by the trustees and management in a more structured way. It is generally accepted that the board of trustees has overall responsibility for risk oversight. One of the roles of the board as stated in the AATF Board Manual is to ensure that "the future well-being of AATF is not jeopardised by exposing its financial resources, its staff or its credibility to imprudent risks".

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**TRUSTEES' ANNUAL REPORT (CONTINUED)
STRATEGIC REPORT (CONTINUED)**

As such, a risk management committee has been established with the purpose of assisting the board in executing its oversight responsibilities with regard to the risk appetite of the Foundation; the risk management and compliance framework; and the governance structure that supports it.

Risk Management Committee

By establishing a Risk Management Committee (the "Committee"), AATF management wants to provide its board with an understanding of the critical risks inherent in the Foundation's strategy. The board will find useful information about the critical assumptions underlying that strategy that will enable it to remain alert to organisational dysfunctions that can lead to excessive risk-taking. The board will therefore be able to provide input to executive management regarding critical risk issues on a timely basis.

The risk oversight process enables the board and management to develop a mutual understanding regarding the risks the Foundation faces over time. The AATF executive management has established a risk management committee to assist the board of trustees in fulfilling its oversight responsibilities with regard to the risk appetite of the Foundation and the risk management and compliance framework, and the governance structure that supports it. Risk appetite is defined as the level and type of risk the Foundation is able and willing to assume in its exposures and business activities, given its objectives and obligations to stakeholders.

The committee has the responsibility to:

- Review and assess risks facing the organisation and the steps management has taken to monitor, control, and report such exposures, including, without limitation, financial, technological, reputational, operational, fraud, strategic, and business-continuity risks, among others.
- Arrange risk assessment and management forums involving AATF trustees and staff.
- Review reports and significant internal and external audit findings with respect to the risk management and compliance activities of the Foundation, together with management's responses and follow-up of these reports.
- Review significant reports from regulatory agencies relating to risk management and compliance issues, and management's response.
- Advise trustees on risks facing AATF twice a year during regular board sessions.
- Recommend to the audit committee of the board to arrange for audits on subject matters identified through risk assessment.
- Recommend any necessary strategic or organisational changes as determined during risk assessment.
- Prepare and issue risk assessment and management reports (on individual cases and for the year).
- Review and evaluate the Foundation's policies and practices concerning risk assessment and management and twice a year present to the audit committee of the board a report summarising its review of the Foundation's risk assessment and management reports.
- Develop semi-annual reports regarding, among other things, the Foundation's compliance with laws and regulations to the audit committee of the board.
- Escalate to the audit committee for discussion at a joint session of the audit and risk committees items that have a significant compliance impact or that require significant financial statement/regulatory disclosures.

Trustees' Report and Strategic Report approved by the Board of Trustees
and signed on behalf of the Board

Dr. Ousmane Badiane

Dr Ousmane Badiane
Chair - Board of Trustees

Date 30/9/2022

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

TRUSTEES' RESPONSIBILITIES STATEMENT

The trustees (who are also directors of the African Agricultural Technology Foundation for company law) are responsible for preparing the Trustees' Annual Report and the financial statements in accordance with applicable law and regulations.

Company law requires the trustees to prepare financial statements for each financial year. Under that law the trustees have elected to prepare the financial statements in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards and applicable law), including FRS 102 The Financial Reporting Standard applicable in the UK and Republic of Ireland. Under company law the trustees must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the charitable company and the group, and of the incoming resources and application of resources, including the income and expenditure, of the charitable company and group for that period. In preparing these financial statements, the trustees are required to:

- select suitable accounting policies and then apply them consistently.
- observe the methods and principles in the Charities SORP (FRS 102).
- make judgements and accounting estimates that are reasonable and prudent.
- state whether applicable UK Accounting Standards have been followed, subject to any material departures disclosed and explained in the financial statements.
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the charitable company will continue in business.

The trustees are responsible for keeping adequate accounting records that are sufficient to show and explain the charitable company's transactions and disclose with reasonable accuracy at any time the financial position of the company and enable them to ensure that the financial statements comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the charitable company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The trustees confirm that:

- so far as each trustee is aware, there is no relevant audit information of which the charitable company's auditor is unaware; and
- the trustees have taken all the steps that they ought to have taken as trustees in order to make themselves aware of any relevant audit information and to establish that the charitable company's auditor is aware of that information.

The trustees are responsible for the maintenance and integrity of the corporate and financial information included on the charitable company's website. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Approved by the Board of Trustees
and signed on behalf of the Board

Dr. Ousmane Badiane

Dr Ousmane Badiane
Chair - Board of Trustees

Date 30/9/2022

**AF AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION

Opinion

We have audited the financial statements of African Agricultural Technology Foundation (the 'parent charitable company') and its subsidiaries (the 'group') for the year ended 31 December 2020, which comprise the Consolidated Statement of Financial Activities, the Consolidated and Parent Balance Sheets, the Consolidated Statement of Cashflows and notes to the financial statements, including a summary of significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards including Financial Reporting Standard 102; The Financial Reporting Standard applicable in the UK and Republic of Ireland (United Kingdom Generally Accepted Accounting Practice).

In our opinion, the financial statements:

- give a true and fair view of the group's and parent charitable company's affairs as at 31 December 2020 and of the group's and the parent charitable company's incoming resources and application of resources including, the group's and the parent income and expenditure for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Companies Act 2006.

Basis for opinion

We have been appointed as auditor under the Companies Act 2006 and report in accordance with regulations made under that Act. We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the 'Auditor's responsibilities for the audit of the financial statements section' of our report. We are independent of the charitable company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Conclusions relating to going concern

We are responsible for concluding on the appropriateness of the trustees' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the group's and the parent charitable company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify the auditor's opinion. Our conclusions are based on the audit evidence obtained up to the date of our report. However, future events or conditions may cause the group or parent charitable company to cease to continue as a going concern.

In our evaluation of the trustees' conclusions, we considered the inherent risks associated with the charitable company's business model including effects arising from macro-economic uncertainties such as Brexit and Covid-19, we assessed and challenged the reasonableness of estimates made by the trustees and the related disclosures and analysed how those risks might affect the group's and charitable company's financial resources or ability to continue operations over the going concern period.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the group's and charitable company's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

In auditing the financial statements, we have concluded that the trustees' use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

The responsibilities of the trustees with respect to going concern are described in the 'Responsibilities of trustees for the financial statements' section of this report.

Other information

The trustees are responsible for the other information. The other information comprises the information included in the Consolidated Report and Financial Statements, other than the financial statements and our auditor's report thereon. Our opinion on the financial

**AF AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION (CONTINUED)

statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

Opinion on other matters prescribed by the Companies Act 2006

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the Strategic Report and the Directors' Report, prepared for the purposes of company law, included in the Trustees' Annual Report for the financial year for which the financial statements are prepared is consistent with the financial statements.
- the Strategic Report and the Directors' Report included in the Trustees' Annual Report have been prepared in accordance with applicable legal requirements.

Matter on which we are required to report under the Companies Act 2006

In the light of the knowledge and understanding of the charitable company and its environment obtained in the course of the audit, we have not identified material misstatements in the Strategic Report or the Directors' Report included in the Trustees' Annual Report.

Matters on which we are required to report by exception

We have nothing to report in respect of the following matters in relation to which the Companies Act 2006 requires us to report to you if, in our opinion:

- adequate accounting records have not been kept by the parent charitable company, or returns adequate for our audit have not been received from branches not visited by us; or
- the parent charitable company's financial statements are not in agreement with the accounting records and returns; or
- certain disclosures of trustees' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

Responsibilities of trustees for the financial statements

As explained more fully in the Trustees' Responsibilities Statement set out on page 41, the trustees (who are also the directors of the charitable company for the purposes of company law) are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the trustees determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the trustees are responsible for assessing the group's and the charitable company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the trustees either intend to liquidate the group or parent charitable company or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a

**AF AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION (CONTINUED)

high level of assurance but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located on the Financial Reporting Council's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.

Explanation as to what extent the audit was considered capable of detecting irregularities, including fraud

Irregularities, including fraud, are instances of non-compliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. Owing to the inherent limitations of an audit, there is an unavoidable risk that material misstatements in the financial statements may not be detected, even though the audit is properly planned and performed in accordance with the ISAs (UK).

The extent to which our procedures are capable of detecting irregularities, including fraud is detailed below:

- We obtained an understanding of the legal and regulatory frameworks that are applicable to the charitable company and the sector in which it operates. We determined that the following laws and regulations were most significant: the Charities SORP (FRS 102), The Financial Reporting Standard applicable in the UK and the Republic of Ireland (FRS 102) and the Companies Act 2006.
- We understood how the charitable company is complying with these legal and regulatory frameworks by making inquiries of management and those charged with governance. We enquired of management and those charged with governance whether there were any instances of non-compliance with laws and regulations, or whether they had any knowledge of actual or suspected fraud. We corroborated the results of our enquiries through our review of board minutes, and through our legal and professional expenses review.
- We assessed the susceptibility of the charitable company's financial statements to material misstatement, including how fraud might occur and the risk of material override of controls. Audit procedures performed by the engagement team included:
 - Identifying and assessing the design effectiveness of certain controls management has in place to prevent and detect fraud
 - Challenging assumptions and judgments made by management in its significant accounting policies
 - Identifying and testing journal entries
 - Identifying and testing related party transactions
 - Inspecting the board minutes
 - Assessing the extent of compliance with the relevant laws and regulations as part of our procedures on the related financial statement item
- These audit procedures were designed to provide reasonable assurance that the financial statements were free from fraud or error. The risk of not detecting a material misstatement due to fraud is higher than the risk of not detecting one resulting from error and detecting irregularities that result from fraud is inherently more difficult than detecting those that result from error, as fraud may involve collusion, deliberate concealment, forgery or intentional misrepresentations. Also, the further removed non-compliance with laws and regulations is from events and transactions reflected in the financial statements, the less likely we would become aware of it
- The assessment of the appropriateness of the collective competence and capabilities of the engagement team included consideration of the engagement team's:

**AF AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION (CONTINUED)

- Understanding of, and practical experience with, audit engagements of a similar nature and complexity through appropriate training and participation
- Understanding of, and practical experience with, audit engagements of a similar nature and complexity through appropriate training and participation
- Understanding of the legal and regulatory requirements specific to the entity including the provisions of the applicable legislation.
- The team communications in respect of potential non-compliance with laws and regulations and fraud included the potential for fraud in revenue recognition through manipulation of income.
- We did not identify any matters relating to non-compliance with laws and regulation and fraud.
- In assessing the potential risks of material misstatement, we obtained an understanding of:
 - The charitable company's operations, including the nature of its revenue sources, to understand the classes of transactions, accounts balances, expected financial statement disclosures and business risks that may result in risks of material misstatement, and
 - The charitable company's control environment, including:
 - Management's knowledge of relevant laws and regulations and how the charitable company is complying with those laws and regulations
 - The adequacy of procedures for authorisation of transactions and review of management accounts, and
 - Procedures to ensure that possible breaches of laws and regulations are appropriately resolved.

Use of our report

This report is made solely to the charitable company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the charitable company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the charitable company and the charitable company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Grant Thornton UK LLP

Stephen Dean BA (Hons) FCA DChA
Senior Statutory Auditor
for and on behalf of Grant Thornton UK LLP
Statutory Auditor, Chartered Accountants
London
Date: 30/9/2022

**AF AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES (INCLUDING INCOME & EXPENDITURE ACCOUNT)
FOR THE YEAR ENDED 31 DECEMBER 2021**

		Restricted funds	Unrestricted funds	Total funds	Restricted funds	Unrestricted funds	Total funds
		2021	2021	2021	2020	2020	2020
	Notes	US\$	US\$	US\$	US\$	US\$	US\$
Income and endowments from:							
Donations and legacies	2	15,240,440	-	15,240,440	12,763,341	1,623,915	14,387,256
Charitable activities		9,244	1,249,481	1,258,725	-	902,835	902,835
Other trading activities		-	293,992	293,992	-	554,505	554,505
Investment income		12,672	569,065	581,737	10,465	410,870	421,335
Other							
- Gain on disposal of fixed asset		-	12,409	12,409	-	32,181	32,181
- Taxation credit		-	-	-	-	-	-
- Capital asset transferred-in		-	-	-	-	-	-
Total		15,262,356	2,124,947	17,387,303	12,773,806	3,524,306	16,298,112
Expenditure on:							
Raising funds		-	1,191,511	1,191,511	-	1,984,681	1,984,681
Charitable activities:							
- Direct costs	3	9,562,107	333,831	9,895,938	8,724,315	321,393	9,045,708
- Support costs**	3	2,953,139	1,026,809	3,979,948	2,399,745	1,258,172	3,657,917
Total		12,515,546	2,552,151	15,067,397	11,124,060	3,564,246	14,688,306
Net operating income		2,747,110	(427,204)	2,319,906	1,649,746	(39,940)	1,609,806
Other gains and losses							
Exchange difference on translating foreign operations		-	127,375	127,375	-	436,418	436,418
Net income / (expenditure)		2,747,110	(299,829)	2,447,281	1,649,746	396,478	2,046,224
Attributable to the owners of the parent		2,747,110	(299,618)	2,447,492	1,649,746	395,298	2,045,044
Attributable to non-controlling interest		-	(211)	(211)	-	1,180	1,180
Reconciliation of funds							
Total funds b/f - attributable to owners		12,025,436	7,896,360	19,921,796	10,375,690	7,501,062	17,876,752
Total funds carried forward		14,772,546	7,596,742	22,369,288	12,025,436	7,896,360	19,921,796

** In Note 3 (page 55), we have included the amount of governance costs of US\$272,292 (2020: US\$189,555) in the support costs.

N/B: Please refer to notes below for further details

AF AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021

CONSOLIDATED AND PARENT BALANCE SHEET
AS AT 31 DECEMBER 2021

Company Registration Number 04645806

		Group Consolidated 2021 US\$	Group Consolidated 2020 US\$	Charity 2021 US\$	Charity 2020 US\$
	Notes				
Non-current assets					
Intangible assets	9a	32	102	-	-
Tangible assets	9b	2,516,234	2,844,759	227,984	338,015
Investment in subsidiaries	21	-	-	36,719	12,556
Loans to group companies		-	-	1,002,973	940,012
Deferred tax asset		-	70,004	-	-
Biological assets	9c	133,683	26,494	-	-
		<u>2,649,949</u>	<u>2,941,359</u>	<u>1,267,676</u>	<u>1,290,583</u>
Current assets					
Grants debtors	10	1,164,171	1,152,862	1,164,171	955,421
Other debtors	11	1,323,586	1,188,170	1,268,467	759,596
Short term deposits		14,224,179	13,740,523	14,224,179	13,740,523
Cash at bank and in hand		5,704,519	3,586,363	4,818,410	3,412,723
Inventories	25	760,894	436,364	-	-
		<u>23,177,349</u>	<u>20,104,282</u>	<u>21,475,227</u>	<u>18,868,263</u>
Current liabilities					
Unexpended grant creditors	10	(628,302)	(9,685)	-	(9,685)
Capital grant		(1,277,933)	(1,282,308)	-	-
Current tax payable		-	(3,061)	-	-
Other creditors	12	(1,468,262)	(1,834,901)	(1,165,207)	(1,366,660)
		<u>(3,374,497)</u>	<u>(3,129,955)</u>	<u>(1,165,207)</u>	<u>(1,376,345)</u>
Net current assets		<u>19,802,852</u>	<u>16,974,327</u>	<u>20,310,020</u>	<u>17,491,918</u>
Non-current liabilities		-	-	-	-
Deferred tax liability		(83,724)	-	-	-
Deferred grant	24	-	-	-	-
Total assets less liabilities		<u>22,369,077</u>	<u>19,915,686</u>	<u>21,577,696</u>	<u>18,782,501</u>
Unrestricted funds		<u>7,596,742</u>	<u>7,896,360</u>	<u>6,805,150</u>	<u>6,757,065</u>
Restricted funds		<u>14,772,546</u>	<u>12,025,436</u>	<u>14,772,546</u>	<u>12,025,436</u>
		<u>22,369,288</u>	<u>19,921,796</u>	<u>21,577,696</u>	<u>18,782,501</u>
Non-controlling interest		(211)	(6,110)	-	-
Total funds		<u>22,369,077</u>	<u>19,915,686</u>	<u>21,577,696</u>	<u>18,782,501</u>

These financial statements are prepared in accordance with the Companies Act 2006 and are approved by the Board of Trustees and signed on its behalf:

Dr. Ousmane Badiane

Dr Ousmane Badiane
Chair – Board of Trustees

DATE 30/9/2022

**AF AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

**CONSOLIDATED STATEMENT OF CASHFLOWS
FOR THE YEAR ENDED 31 DECEMBER 2021**

	Note	Group Consolidated 2021 US\$	Group Consolidated 2020 US\$	Charity 2021 US\$	Charity 2020 US\$
CASH FLOWS FROM OPERATING ACTIVITIES					
Cash provided by operating activities	16	2,249,922	1,517,196	2,005,578	3,135,033
Tax received/(paid)		4,872	4,872	-	-
Net cash provided by operating activities		<u>2,254,794</u>	<u>1,522,068</u>	<u>2,005,578</u>	<u>3,135,033</u>
INVESTING ACTIVITIES					
Investment income		19,792	37,568	16,325	27,729
Purchase of assets	9b	(289,348)	(1,072,674)	(48,100)	(332,927)
Purchase of intangible assets	9a	-	-	-	-
Disposal of biological assets	9c	29,494	73,197	-	-
Purchase of biological assets		(136,683)	(13,604)	-	-
Proceeds on disposal of equipment		43,371	44,869	2,663	27,370
Loan advanced to group companies		-	-	(62,960)	(54,690)
Investment in subsidiaries		-	-	(24,163)	-
Net cash used in investing activities		<u>(333,374)</u>	<u>(930,644)</u>	<u>(116,235)</u>	<u>(332,518)</u>
CHANGE IN CASH AND CASH EQUIVALENTS		1,921,420	591,424	1,889,343	2,802,515
CASH AND CASH EQUIVALENTS AS AT 1 JANUARY					
Cash at bank and in hand		3,586,363	6,593,651	3,412,723	5,838,124
Short term deposits		13,740,523	8,512,608	13,740,523	8,512,608
Effect of translation on foreign entities		680,392	1,629,203	-	-
CASH AND CASH EQUIVALENTS AS AT 31 DECEMBER		<u>19,928,698</u>	<u>17,326,886</u>	<u>19,042,589</u>	<u>17,153,247</u>

ANALYSIS OF CHANGES IN NET DEBT	At 1 Jan 2021	Cashflows	At 31 Dec 2021
Cash and cash equivalents			
Cash	3,586,363	2,118,156	5,704,519
Cash equivalents	13,740,523	483,656	14,224,179
Overdrafts	-	-	-
	<u>17,326,886</u>	<u>2,601,812</u>	<u>19,928,698</u>
Borrowings			
Debt due within one year	-	-	-
Debt due after one year	-	-	-
	<u>-</u>	<u>-</u>	<u>-</u>
Total	<u>17,326,886</u>	<u>2,601,812</u>	<u>19,928,698</u>

N/B: Please refer to Notes below for further details

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021**

NOTES TO THE FINANCIAL STATEMENT

1. ACCOUNTING POLICIES

Statement of Compliance and Basis of Preparation

African Agricultural Technology Foundation is a public benefit entity, a private company limited by guarantee, registered in England and whose headquarters is in Nairobi, Kenya. The Registered Office is c/o Arnold and Porter (UK) LLP, Level 30, Tower 42, 25 Old Broad Street, EC2N 1HQ, London, UK. The main country of reporting is Kenya where financial statements are prepared in accordance with the International Financial Reporting Standards (IFRS). The audit exercise is undertaken both in Kenya and the UK. However, since the organisation is a registered company and charity in the UK, we are required to prepare financial statements in compliance with the Charities SORP (FRS 102) "Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standards applicable in the UK and Republic of Ireland (FRS 102) (effective 1 January 2019)".

The financial statements have been prepared under the historical cost convention. Except for the analysis of highest paid staff which is given in GBP for clarity of disclosure compliance, the financial statements are prepared in US\$ which is the functional currency of the Company and rounded to the nearest US\$.

A separate statement of financial activities and income and expenditure accounts are not presented for the Charity itself in accordance with the applicable exemptions afforded by section 408 of the Companies Act 2006. All group entities have uniform accounting policies.

The principal accounting policies adopted in the preparation of the financial statements are set out below. The financial statements are prepared on a going concern basis.

Going concern

The financial statements have been prepared on the going concern basis, which the trustees consider to be appropriate in the context of the Charity's ability to meet its obligations as they fall due in the period of 12 months following the date of approval of these financial statements. This assessment is based on the fact that all the major investors continue to fund the activities of the Charity. Currently majority of the projects have multi-year funding commitments. The overall cashflow situation of the Charity is expected to remain stable and based on the latest cashflow forecasts, it is estimated that the organisation will have cash and cash equivalents to the excess of US\$13 million, a year from the date of this report. This represents approximately 74% of our annual average budgets.

The trustees regularly review the medium and long-term financial position of the Foundation and the group, including its current and predicted future cash flows. The COVID-19 pandemic spread rapidly in 2020, with a substantial number of infection cases globally. Measures taken to contain the virus such as restricted movements significantly affected economic activity at a global scale. This impact, however, is more on the management of programme activities and not on the financial health of the Foundation. The management has considered the consequences of the pandemic and other events and conditions, and it has determined that they do not create a material uncertainty that casts significant doubt upon the entity's ability to continue as a going concern. There are also no indications that the effect of the pandemic has any significant impact on the results for the current reporting period.

During the 2020 financial year, the trustees gave considerable attention to the outlook of the Foundation and the group with a more rigorous financial modelling than usual on a range of post COVID-19 scenarios. This prompted the development of an 'AATF Response to COVID-19 Plan'. Short and medium to long term interventions have been identified in line with AATF's strategy to mitigate the effects of COVID-19. The measures include intensification of existing interventions; and introduction of new ones which are the majority. These interventions will be packaged in line with any donor calls or interest as AATF looks for additional funding to implement them.

The substantive 2022 budget presented and approved by the board in May 2022 meeting shows that total expected income will equal the projected expenditure hence the Foundation is expected to operate at zero surplus/ deficit level. The Foundation is aware of COVID-19 possible impacts on a going concern, financial instruments, business interruption and possible delays in achieving targets. Having carried out this in-depth exercise and reviewed the outputs at board meetings, the trustees strongly believe that the Foundation is doing well despite the challenges posed by COVID-19 as reflected in the resources pipeline. The Foundation has a reasonable level of liquid resources buttressed by new grants provided by Bill and Melinda Gates Foundation in November 2020 for a period of five years as well as another USAID grant for TELA and Cowpea projects that ends in 2023. In addition, the Foundation received a 14 months' extension from BMGF for the TELA project and another 7 months extension for its EGS project. Therefore, after taking into consideration the scenarios, the trustees have a reasonable expectation that the Foundation and the group have adequate resources to continue in

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021**

1. ACCOUNTING POLICIES (CONTINUED)

operational existence for the foreseeable future of a minimum of 12 months from when these financial statements are approved. Accordingly, they continue to adopt a going concern basis in preparing these financial statements.

Judgements and key sources of estimation uncertainty

The preparation of the financial statements requires management to make judgements, estimates and assumptions that affect the amounts reported for assets and liabilities as at the balance sheet date and the amounts reported for revenues and expenses during the year. However, the nature of estimation means that actual outcomes could differ from those estimates. Specific areas of judgement include depreciation and useful economic lives of assets and provisions. The nature of the estimation means that actual outcomes could differ from those estimates. None of the judgements have a significant effect on the financial statements. These judgements and key sources of estimation uncertainty are set out in this section i.e., Note 1 (accounting policies) and specifically as set out in pages 49–53.

Income

Income is recognised in the accounts when all the below criteria are met:

- Entitlement – control over the rights or other access to the economic benefit has passed to the charity.
- Probable – it is more likely than not that the economic benefits associated with the transaction or gift will flow to the charity.
- Measurement – the monetary value or amount of the income can be measured reliably, and the costs incurred for the transaction and the costs to complete the transaction can be measured reliably.

Interest income is accrued on a time basis by reference to the principal outstanding and at the effective interest rate applicable.

Overhead income represents revenue derived from projects' grants to support these indirect costs meant to cover administrative or other expenses related to general operations that are shared among projects and/or functions and which cannot be directly allocable to a particular activity. These may include executive oversight, existing facilities costs, accounting, grants management, legal expenses, utilities, and audit.

Grants are recognised as revenue upon the fulfilment of donor-imposed conditions or restrictions attached to the grants as explained below:

Structure of Funds

Where there is a legal restriction on the purpose to which a fund may be put, the fund is classified in the accounts as a restricted fund. Some restricted funds are in a deficit position due to the timing of recognition of grant income under the SORP. In the short term the projects funded by these restricted grants are pre-financed from general funds for cash flow purposes, the project expenditure is then matched with further restricted grants received since the year end when such expenditure meets the criteria of the related grant funding. Funds where the capital is held to generate income for charitable purposes and cannot be spent are accounted for as endowment funds. Other funds are classified as unrestricted funds. Funds which are not legally restricted but which the Trustees have chosen to earmark for set purposes are treated as designated funds. The major funds held within these categories are disclosed in note 2.

Expenditure

Expenditure is recognised on an accrual basis as a liability is incurred. Expenditure includes any Value Added Tax (VAT) which cannot be fully recovered and is reported as part of the expenditure to which it relates.

Other costs include those costs associated with meeting the constitutional and statutory requirements of the charity and includes the audit fees and costs linked to the strategic management of the charity.

Support Costs

All costs are allocated between the expenditure categories of the Statement of Financial Activities on a basis designed to reflect the use of the resource. Costs relating to a particular activity are allocated directly, and support costs are apportioned on an appropriate basis e.g., estimated usage, as set out in note 3.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021**

1. ACCOUNTING POLICIES (CONTINUED)

Tangible Assets

Property, plant, and equipment are stated at cost less accumulated depreciation and accumulated impairment losses. Items of lasting value with an initial acquisition cost of less than US\$1,000 are charged to operating expenses in the year of purchase. For some donors like Bill and Melinda Gates Foundation all items valued less than US\$ 5,000 are considered operational expenses and not capital expenses.

Depreciation is provided on all property, plant, and equipment, at rates calculated to write off the cost, less estimated residual value, of each asset on a systematic basis over its expected useful life as follows:

Computers and related equipment	3 years
Motor vehicles	4 years
Furniture and equipment	5 years

The carrying values of tangible fixed assets are reviewed for impairment when events or changes in circumstances indicate the carrying value may not be recoverable.

Biological Assets

An entity shall recognise a biological asset or agricultural produce when, and only when:

- the entity controls the asset as a result of past events.
- it is probable that future economic benefits associated with the asset will flow to the entity; and
- the fair value or cost of the asset can be measured reliably.

Biological assets are measured at their fair value less costs to sell.

A gain or loss arising on initial recognition of agricultural produce at fair value less costs to sell is included in surplus or deficit for the period in which it arises.

Where market determined prices or values are not available, the present value of the expected net cash inflows from the asset, discounted at a current market-determined rate is used to determine fair value.

An unconditional government grant related to a biological asset measured at its fair value less costs to sell is recognised as income when the government grant becomes receivable.

Where fair value cannot be measured reliably, biological assets are measured at cost less any accumulated depreciation and any accumulated impairment losses.

Intangible Assets

Intangible assets acquired separately from a business are capitalised at cost. After initial recognition, intangible assets are stated at cost less accumulated amortisation and accumulated impairment. Intangible assets are amortised on a straight-line basis over their estimated useful lives. The carrying value of intangible assets is reviewed for impairment if events or changes in circumstances indicate the carrying value may not be recoverable.

The useful economic lives of intangible assets are as follows:

Computer Software 3 years

If there are indicators that the residual value or useful life of an intangible asset has changed since the most recent annual reporting period previous estimates shall be reviewed and, if current expectations differ the residual value, amortisation method or useful life shall be amended. Changes in the expected useful life or the expected pattern of consumption of benefit shall be accounted for as a change in accounting estimate.

Operating Leases

Rentals payable under operating leases are charged to the Statement of Financial Activities on a straight-line basis over the lease term.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021**

1. ACCOUNTING POLICIES (CONTINUED)

Pension Contributions

AATF operates a defined contribution pension scheme. The assets of the scheme are held separately from those of the company in an independently administered fund. The amount charged to the income and expenditure account represents the contributions payable to the scheme in respect of the accounting period.

AATF makes pension contributions to an offshore defined pension contribution scheme (Vanbreda International) for expatriate staff and to a local defined pension scheme (Liberty) for all Kenyan staff. The contribution made is 15 per cent equivalent of each employee's basic salary.

Currency Translation

The Foundation's financial statements are presented in United States Dollars (US\$), the functional currency. Transactions and balances expressed in currencies other than the US Dollar are treated as follows:

- Non-US dollar grants and donations received in the year are converted to US dollars at the rates of exchange prevailing on the dates of receipt. Non-US dollar grants and donations pledged for the year but not received by the period-end are recognised in the financial statements at the rates of exchange prevailing at the period-end.
- Non-US dollar denominated expenditures are recorded at the average rates of exchange for the month in which they are incurred and are accumulated in US dollars.
- Assets and liabilities that are denominated in currencies other than the US dollar are restated into US dollars at the rates of exchange prevailing at the period-end.
- Gains and losses arising from changes in exchange rates are charged or credited to the statement of comprehensive income in the period in which they arise.
- Emoluments to key employees are translated from US dollars to Great British Pound using the rate of exchange prevailing at the period-end. This disclosure is in compliance with the requirements of the SORP reporting with regard to employees whose total emoluments exceed £60,000 annually. The emoluments have been presented in bands of £10,000.

Taxation

As a charity, AATF is exempt from tax on income and gains falling within Chapter 3 of Part 11 to the Corporation Tax Act 2010 to the extent that these are applied to its charitable objects. No tax charges have arisen in the charity. The charity is exempt from corporation tax and enjoys a Value added Tax (VAT) exemption.

Donated Services

The trustees are grateful to ARCN who has provided office space in Abuja as part of their support of our work in Nigeria. No value has been placed on this in the SOFA as it is not material in the context of the accounts.

Financial Instruments

The company recognises financial instruments when it becomes a party to the contractual arrangements of the instrument. Financial instruments are de-recognised when they are discharged or when the contractual terms expire. The company's accounting policies in respect of financial instruments transactions are explained below:

Financial Assets

The company classifies all its financial assets as loans and receivables.

Loans and Receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They arise principally through the provision of goods and services to customers (e.g., trade receivables), but also incorporate other types of contractual monetary asset. They are initially recognised at fair value plus transaction costs that are directly attributable to their acquisition or issue and are subsequently carried at amortised cost using the effective interest rate method, less provision for impairment. Impairment provisions are recognised when there is objective evidence (such as significant financial difficulties on the part of the counterparty or default or significant delay in payment) that the company will be unable to collect all the amounts due under

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021**

1. ACCOUNTING POLICIES (CONTINUED)

the terms receivable, the amount of such a provision being the difference between the net carrying amount and the present value of the future expected cash flows associated with the impaired receivable. For trade receivables, which are reported net, such provisions are recorded in a separate allowance account with the loss being recognised within administrative expenses in the income statement. On confirmation that the trade receivable will not be collected, the gross carrying value of the asset is written off against the associated provision.

Financial Liabilities

The company classifies all its financial liabilities as liabilities at amortised cost. Financial liabilities at amortised cost including bank borrowings are initially recognised at fair value net of any transaction costs directly attributable to the issue of the instrument. Such interest-bearing liabilities are subsequently measured at amortised cost using the effective interest rate method, which ensures that any interest expense over the period to repayment is at a constant rate on the balance of liability carried into the statement of financial position.

Inventories

Inventories are measured at the lower cost and net realisable value on the first-in-first-out basis. Net realisable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale. The cost of inventories comprises of all costs of purchase, costs of conversion and other costs incurred in bringing the inventories to their present location and condition.

AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021

2 INCOME FROM DONATIONS AND LEGACIES

	Restricted funds	Unrestricted funds	Total funds	Total funds
	2021	2021	2021	2020
	US\$	US\$	US\$	US\$
Voluntary Income				
USAID	3,669,605	-	3,669,605	3,577,633
DFID	-	-	-	1,603,136
Bill & Melinda Gates Foundation – TELA Project	4,215,871	-	4,215,871	4,971,874
Bill & Melinda Gates Foundation – QBS Project	2,113,502	-	2,113,502	602,100
Bill & Melinda Gates Foundation – Other Projects	4,200,906	-	4,200,906	2,657,204
CIMMYT	44,000	-	44,000	-
International Institute for Tropical Agriculture (IITA)	831,267	-	831,267	954,530
Alliance for a Green Revolution in Africa (AGRA)	-	-	-	-
Syngenta Foundation for Sustainable Agriculture (SFSA)	76,991	-	76,991	-
EU- REA	88,298	-	88,298	-
Total voluntary income - Charity	15,240,440	-	15,240,440	14,366,477
PyroGenesys	-	-	-	20,779
Total voluntary income - Group	15,240,440	-	15,240,440	14,387,256

Income is analysed by geographical source of origin

	2021 US\$	2020 US\$
North America	14,243,884	11,808,811
Europe	165,289	1,623,915
Africa	831,267	954,530
	15,240,440	14,387,256

AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021

3. CHARITABLE EXPENDITURE

Currency US\$	TELA	QBS	COWPEA	TAAT	OFAB	HYBRID RICE	NEWEST RICE	SEEDS2B	CASSAVA	MLN	NEW PROJECT INITIATIVES	EGS	GOVERNANCE COSTS**	2021 Total	2020 Total
Outsourced Research Activities	1,983,376	884,609	836,461	248,748	920,000	722,533	84,200	6,000	-	-	15,000	-	-	5,700,927	5,142,240
Project Supplies	273,028	37,936	1,165	3,212	-	35,372	-	13,355	19,351	-	175,999	-	-	559,418	215,864
Travel	60,395	-	74,034	2,759	23,544	24,723	1,632	9,790	1,150	472	3,828	26,069	-	228,396	176,728
Conference & Workshops	47,955	-	123,740	9,247	103,511	-	33,180	55,977	-	-	-	2,875	-	376,485	131,743
Rentals	112,064	-	20,847	-	34,051	20,847	-	14,540	-	-	-	-	-	202,349	202,054
Direct Staff Costs	963,460	-	130,060	91,189	257,758	176,880	10,518	50,550	-	-	-	-	-	1,680,415	1,983,673
Institutional Support	546,229	111,801	-	-	267,147	132,003	26,635	16,892	-	3,648	3,629	39,964	-	1,147,948	1,193,406
Cost directly allocated to activities	3,986,507	1,034,346	1,186,307	355,155	1,606,011	1,112,358	156,165	167,104	20,501	4,120	198,456	68,908	-	9,895,938	9,045,708
General Personnel Costs	766,023	183,269	545,332	-	263,894	83,076	19,624	53,129	-	20,069	19,287	282,702	-	2,236,405	1,918,383
Consultancy and other professional services	231,708	784	62,777	1,340	123,849	70,058	114,546	-	46,571	19,350	89,219	7,533	203,259	970,994	898,085
Depreciation	17,242	-	88,247	4,823	13,082	30,600	-	556	-	-	-	-	-	154,550	159,882
General expenses and supplies	109,618	7,976	178,048	1,105	130,988	18,139	8,789	24,216	-	1,457	1,872	9,616	-	491,824	556,507
Forex Losses on revaluations	573	365	31,722	-	24,409	76	-	(3)	-	-	-	-	-	57,142	72,716
Board expenses	-	-	-	-	-	-	-	-	-	-	-	-	69,033	69,033	52,344
Support costs allocated to activities*	1,125,164	192,394	906,126	7,268	556,222	201,949	142,959	77,898	46,571	40,876	110,378	299,851	272,292	3,979,948	3,657,917
Total charitable expenditure	5,111,671	1,226,740	2,092,433	362,423	2,162,233	1,314,307	299,124	245,002	67,072	44,996	308,834	368,759	272,292	13,875,886	12,703,625

** Refer to Note 18 for further details.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021**

4. PERSONNEL COSTS

Personnel Costs - Group	2021 US\$	2020 US\$	2021 £	2020 £
Salaries and wages	3,518,530	3,540,316	2,639,953	2,602,132
NI social security costs	250,591	233,858	188,018	171,886
Pension costs	400,072	376,108	300,174	276,439
Other personnel costs	260,151	352,226	195,191	258,886
	<u>4,429,344</u>	<u>4,502,508</u>	<u>3,323,336</u>	<u>3,309,343</u>
Personnel costs - Charity				
	2021 US\$	2020 US\$	2021 £	2020 £
Salaries and wages	3,111,914	3,007,757	2,334,869	2,210,702
NI social security costs	220,153	195,272	165,181	143,525
Pension costs	344,750	327,672	258,666	240,839
Other personnel costs	240,003	371,353	180,074	272,945
	<u>3,916,820</u>	<u>3,902,054</u>	<u>2,938,790</u>	<u>2,868,011</u>

The Charity had an average of 47 employees during the year (2020: 46). The Group had an average of 70 employees during the year (2020: 66). The directors consider that key management personnel are the senior management (executive directors). Remuneration for key management personnel for the charity totalled \$1,201,585 / £901,549 (2020: US\$1,120,786 / £823,778).

The number of employees for the Charity with total emoluments for the year of over £60,000 (approximately USD 80,000) was as follows:

	2021 No.	2020 No.
USD100,001 - USD120,000	-	1
USD120,001 - USD140,000	2	-
USD140,001 - USD160,000	1	-
USD160,001 - USD180,000	5	4
USD180,001 - USD200,000	5	4
USD200,001 - USD220,000	1	2
USD220,001 - USD240,000	-	-
USD240,001 - USD260,000	1	1
USD260,001 - USD280,000	-	-
USD280,001 - USD300,000	-	1

Contributions in the year for the above higher-paid charity employees to defined contribution pension scheme totalled US\$ 237,323 / £178,063 (2020: US\$ 216,924 / £159,439)

The number of the above higher-paid employees to whom retirement benefits are accruing under defined contribution pension schemes for the charity totalled 15; (2020: 13).

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021**

5. CONSULTANTS' AND PROFESSIONAL EXPENSES

	Group		Charity	
	2021 US\$	2020 US\$	2021 US\$	2020 US\$
Consultants' fees	745,327	729,079	745,327	728,425
Consultants' travel, accommodation, and reimbursements	4,377	2,067	3,621	2,067
External audit (Various - See Note 7)	129,530	117,811	91,868	60,170
Internal audit (KKCO)	9,176	9,103	9,176	9,103
Legal fees	39,043	105,649	25,195	51,083
Taxation and secretarial services	138,796	81,424	95,807	47,237
	1,066,249	1,045,133	970,994	898,085
Allocated:				
Charitable expenditure (note 3)	767,736	760,874	767,736	760,874
Other costs (note 18)	203,258	137,211	203,258	137,211
Trading expenses – subsidiaries	95,255	147,048	-	-
	1,066,249	1,045,133	970,994	898,085

6 GENERAL EXPENSES AND SUPPLIES

	Group		Charity	
	2021 US\$	2020 US\$	2021 US\$	2020 US\$
Office and computer supplies	283,205	329,835	243,663	271,793
Communication	107,013	132,804	93,939	121,697
Vehicle expenses	42,190	58,788	41,216	49,110
Other office expenses	161,773	136,843	112,088	113,908
	594,181	658,270	490,906	556,508

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021**

7 NET INCOME / (EXPENDITURE) FOR THE YEAR

This is stated after charging:

	Group		Charity	
	2021	2020	2021	2020
	US\$	US\$	US\$	US\$
Depreciation - Property, plant, and equipment (PP&E)	184,657	240,432	154,550	156,988
Amortisation	70	3,035	-	2,892
External Audit - Charity (Grant Thornton - UK)	45,506	32,521	45,506	32,521
External Audit - Charity (Grant Thornton - KE)	28,880	23,200	28,880	23,200
External Audit - Agridrive Nigeria Ltd (Grant Thornton - Nigeria)	5,339	5,710	-	-
External Audit - Agridrive Nigeria Ltd (Grant Thornton - Nigeria)	5,032	-	-	-
External Audit - QBS Kenya Ltd (BDO Kenya / BDO ZIM & BDO RSA)	27,291	31,500	-	-
Fees payable to company auditors for other services	12,925	4,800	12,925	4,800
Operating lease costs	201,550	201,550	201,550	201,550

AATF has entered into a hosting agreement with International Livestock Research Institute (ILRI). This agreement includes among other things a lease arrangement for office space by AATF payable on a quarterly basis. The hosting agreement automatically renews annually. The current agreement expires on 31 December 2021. However, management has determined that it may continue leasing this office space for the next seven years up until 31 December 2028. Therefore, the total of future minimum lease payments made under non-cancellable operating leases for the next year is US\$201,550 (2020: US\$201,550). The total of future minimum lease payments made under optional operating leases for the next two to five years is US\$806,200 (2020: 806,200). The total of future minimum lease payments made under optional operating leases for the period after five years is US\$201,550 (2020:US\$403,100).

8 TRUSTEE REMUNERATION AND RELATED PARTY TRANSACTIONS

The Board of Trustees (BOT) of the Foundation were paid honoraria of US\$36,466 (2020: US\$40,350) for their role in meetings and other corporate activities of the Foundation. Indemnity insurance for trustees that was paid during the year amounted US\$9,453 (2020: US\$10,304). Other board meeting expenses were non-BOT per diem US\$4,500 (2020: US\$0) and other board expenses US\$18,614 (2020: US\$1,690).

No trustee or other person related to the charity had any personal interest in any contract or transaction entered into by the charity during the year (2020: Nil). The Charity engaged the services of Deloitte & Touché LLP (Kenya) on a consultancy basis to undertake business process reengineering work for a fee of \$55,912. As at the date of this report, a balance of \$27,956 remains unpaid from the total contract amount. This will be payable to the consultant on submission of satisfactory interim and final reports. After engagement of Deloitte, it was realised that one of their staff is the brother of the current Director of Corporate Services at the Charity. The Director of Corporate Services was directly involved in the engagement of Deloitte. As this apparent conflict of interest had not been disclosed at the engagement stage, the Charity took steps to address the matter as stipulated in its policies. We would like to report that as at the date of this report, the matter has been adjudicated and concluded through the disciplinary process.

The charity has advanced loans to senior management personnel, the balance outstanding at the year-end totalled US\$29,125 for 2 employees (2020: US\$22,573 for 2 employees). Such loans are interest free.

No one party has ultimate control over the charity, and all transactions are on an arm's length basis.

We have disclosed in detail the subsidiaries under charity's control as at 31 December 2021 in note 21 "Investment in Subsidiaries".

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021**

9a INTANGIBLE ASSETS - GROUP

	Computer software US\$	Total US\$
Cost		
At 1 January 2021	51,888	51,888
Additions	-	-
At 31 December 2021	51,888	51,888
Depreciation/Amortisation		
At 1 January 2021	51,786	51,786
Charge for the year	70	70
At 31 December 2021	51,856	51,856
Net book value		
As at 31 December 2021	32	32
As at 31 December 2020	102	102

9a INTANGIBLE ASSETS - CHARITY

	Computer software US\$	Total US\$
Cost		
At 1 January 2021	51,524	51,524
Additions	-	-
At 31 December 2021	51,524	51,524
Depreciation/Amortisation		
At 1 January 2021	51,524	51,524
Charge for the year	-	-
At 31 December 2021	51,524	51,524
Net book value		
As at 31 December 2021	-	-
As at 31 December 2020	-	-

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021**

9b TANGIBLE ASSETS - GROUP

	Motor Vehicles, trailers, m/bikes, scooters	Furniture and office equipment	Computers and related equipment	Tractors	Farm Equipment and Implements	Work in Progress (WIP)	Buildings	Leasehold Improvements	Temporary Buildings	Land	Total
	US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$		US\$
Cost											
At 1 January 2021	820,068	334,044	208,802	1,587,365	534,143	134,395	380,902	31,194	13,025	-	4,043,938
Additions	122,690	51,004	28,857	7,189	1,612	63,250	-	-	218	14,528	289,348
Disposals	(10,491)	(39,301)	(17,797)	(48,949)	(67,049)	(3,978)	(13,101)	(1,669)	(697)	-	(203,032)
As at 31 Dec 2021	932,267	345,747	208,802	1,545,605	468,706	193,667	367,801	29,525	12,546	14,528	4,130,254
Depreciation/Amortisation											
At 1 January 2021	490,774	162,099	156,500	189,782	187,337	-	-	11,833	814	-	1,199,179
Charge for the year	139,909	54,077	32,088	157,010	83,881	-	-	5,986	3152	-	476,103
Disposals	(6,722)	(4,571)	(12,998)	(13,330)	(22,841)	-	-	(714)	(86)	-	(61,262)
As at 31 Dec 2021	623,961	211,605	175,590	333,462	248,417	-	-	17,105	3,880	-	1,614,020
Net book value											
As at 31 Dec 2021	308,306	134,142	44,272	1,212,143	220,289	193,667	367,801	12,420	8,666	14,528	2,516,234
As at 31 Dec 2020	329,293	171,946	52,302	1,397,583	346,766	134,395	380,902	19,361	12,211	-	2,844,759

9b TANGIBLE ASSETS - CHARITY

	Motor vehicles, trailers, m/bikes, scooters	Furniture & office equipment	Computers & related equipment	Total
	US\$	US\$	US\$	US\$
Cost				
At 1 January 2021	594,973	146,393	173,750	915,116
Additions	30,799	7,346	9,955	48,100
Disposals	-	-	(17,085)	(17,085)
As at 31 December 2021	625,772	153,739	166,620	946,131
Depreciation/Amortisation				
At 1 January 2021	340,738	102,540	133,823	577,101
Charge for the year	112,118	14,527	27,905	154,550
Disposals	-	-	(13,504)	(13,504)
As at 31 December 2021	452,856	117,067	148,224	718,147
Net book value				
As at 31 December 2021	172,916	36,672	18,396	227,984
As at 31 December 2020	254,235	43,853	39,927	338,015

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021**

9c BIOLOGICAL ASSETS	Group US\$	Charity US\$
Cost		
At 1 January 2021	26,494	-
Additions	136,683	-
(Decreases) due to harvest	(29,494)	-
As at 31 December 2021	133,683	-
Depreciation/Amortisation		
At 1 January 2021	-	-
Charge for the year	-	-
Disposals	-	-
As at 31 December 2021	-	-
Net book value		
As at 31 December 2021	133,683	-
As at 31 December 2020	26,494	-

The biological assets reported in this note relates to hybrid maize seeds cultivated by the charity's subsidiary, QBS Kenya Limited. Biological assets are measured at their fair value less costs to sell.

AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021

10 GRANT DEBTORS/ (UNEXPENDED GRANTS)

Donor	Grant Debtors brought forward 01.01.2021 US\$	Unexpended grants brought forward 01.01.2021 US\$	Receipts US\$	Expenditure US\$	Adjustment	Grant Debtors carried forward 31.12.2021 US\$	Unexpended grants carried forward 31.12.2021 US\$
DFID	-	-	-	-	-	-	-
USAID	955,421	-	3,332,676	3,541,426	-	1,164,171	-
BMGF-TELA, Hybrid Rice, OFAB, QBS	-	(9,685)	10,530,279	10,530,279	9,685	-	-
IITA	-	-	831,267	831,267	-	-	-
CIMMYT	-	-	44,000	44,000	-	-	-
SFSA-SEEDS2B/PASTTA	-	-	205,170	205,170	-	-	-
EU-REA	-	-	88,298	88,298	-	-	-
Total – Charity	955,421	(9,685)	15,031,690	15,240,440	9,685	1,164,171	-
BMGF – QBS Company Ltd	197,441	-	1,258,166	432,423	-	-	(628,302)
Total – Group	1,152,862	(9,685)	16,289,856	15,672,863	9,685	1,164,171	(628,302)

11 OTHER DEBTORS

	Group 2021 US\$	Charity 2020 US\$	2021 US\$	2020 US\$
Staff loans	116,877	91,291	116,877	91,291
Advances for travel and expenses	104,607	62,683	88,904	61,724
ILRI	1,454	10,718	1,454	10,718
AIARC current account	47,731	72,785	47,731	72,785
Prepayments	269,138	172,421	134,798	94,287
Trade debtors	366,231	476,893	537,305	173,638
USDA-FAS	199,748	131,825	199,748	131,825
Klein Karoo	27,155	94,930	27,155	94,930
Credit cards	9,751	2,438	-	-
Other receivables	123,378	59,038	77,480	25,405
VAT	20,020	10,155	-	-
Refundable taxes	37,015	2,993	37,015	2,993
Current tax receivable	481	-	-	-
	1,323,586	1,188,170	1,268,467	759,596

Loans are provided to staff, after approval in accordance with AATF's policies, as part of AATF's staff retention strategy, as such incentives are provided by other similar local organisations.

AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021

12 ANALYSIS OF CREDITORS FALLING DUE WITHIN ONE YEAR

	Group		Charity	
	2021	2020	2021	2020
	US\$	US\$	US\$	US\$
Accrued leave	177,534	198,637	177,534	198,637
Accrued services	84,453	99,426	84,453	99,426
Other creditors	189,232	191,221	29,893	-
Trade creditors	105,195	268,228	24	13,226
Amounts owed to group and associated undertakings	-	-	-	-
Seed Revolving Fund	6,342	-	6,342	-
Collaborating Organisations	391,654	481,734	373,429	467,396
Credit cards	4,461	4,311	4,461	4,255
Payroll & withholding liabilities	509,109	583,720	489,071	583,720
VAT	282	7,624	-	-
	<u>1,468,262</u>	<u>1,834,901</u>	<u>1,165,207</u>	<u>1,366,660</u>

13 PROVISIONS FOR LIABILITIES

In the prior years, the Foundation had made a provision relating to employee payments that were expected to be resolved in the succeeding years. However, its payment has been delayed indefinitely and the Foundation decided to reverse the provision. As and when the likelihood of payment of these liabilities become high, the Foundation will make necessary provisions.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021**

14 MOVEMENT IN FUNDS

Fund name	Fund balances brought forward US\$	Incoming resources US\$	Outgoing resources US\$	Transfers* US\$	Fund balances carried forward US\$
Unrestricted:					
Rockefeller	265,688	-	-	-	265,688
DFID	962,550	-	-	-	962,550
Reserves Account	4,603,284	1,818,546	1,360,640	(409,724)	4,651,466
Sub-total Unrestricted - Charity	5,831,522	1,818,546	1,360,640	(409,724)	5,879,704
Restricted:					
USAID	297,340	3,669,605	3,481,226	-	485,719
Bill and Melinda Gates Foundation and Howard Buffet Foundation	12,103,725	10,541,563	8,544,847	-	14,100,441
IITA	(409,984)	841,898	361,513	-	70,401
CIMMYT	(3,882)	44,000	40,120	-	(2)
SFSA	(17,550)	76,991	41,155	-	18,286
AGRA	(2,249)	-	-	-	(2,249)
SNV Netherlands	(87,991)	-	27,636	-	(115,627)
Africa Harvest	89,076	-	-	-	89,076
NEPAD/FARA	17,083	-	-	-	17,083
Kirkhouse Trust	12,824	-	-	-	12,824
EU-REA	-	88,299	18,749	-	69,550
FOCAC	27,044	-	-	-	27,044
Sub-total Restricted - Charity	12,025,436	15,262,356	12,515,246	-	14,772,546
Total Charity	17,856,958	17,080,902	13,875,886	(409,724)	20,652,250
Unrestricted					
Pyropower – Agridrive Ltd	-	-	-	-	-
Subsidiaries' Activities – Agridrive Ltd & QBS Ltd	2,058,731	306,401	1,191,511	543,206	1,716,827
	19,915,689	17,387,303	15,067,397	133,482	22,369,077

*Transfers relate to unexpended portion of the sub-grant disbursed by the Foundation to QBS & ECOBasic (subsidiaries). This amount has been reduced from the total charity expenditure and from the subsidiaries' total income respectively.

Some restricted funds are in a deficit position due to the timing of recognition of grant income under the SORP. In the short term the projects funded by these restricted grants are pre-financed from general funds for cash flow purposes, the project expenditure is then matched with further restricted grants received since the year end when such expenditure meets the criteria of the related grant funding. At the end of 2021, three restricted grants (CIMMYT, AGRA and SNV Netherlands) had negative fund balances. However, these balances will be fully reimbursed by the grantors in the subsequent year.

Unrestricted funds can be used in accordance with the charitable objects at the discretion of the trustees. Restricted funds can only be used for the projects for which they are designated. Details are as given below:

- USAID grant is for Cowpea, NEWEST Rice, and TELA projects. USAID also extended a sub-grant to AATF for Seeds2B Project through SFSA (lead grantee).
- Bill and Melinda Gates Foundation grant is for the TELA, OFAB, Hybrid Rice, EGS and Qualibasic Seeds projects.
- The African Development Bank extended a sub-grant to AATF for TAAT compacts through IITA (lead grantee).
- CIMMYT sub-grant was for Maize Lethal Necrosis project.
- Syngenta Foundation for Sustainable Agriculture (SFSA) leverages the PASTTA project.
- SNV Netherlands Development Organisation Ghana extended a grant to fund GATE project work in Ghana.
- European Union's Research Executive Agency (EU-REA) funds BIOA4AFRICA project.

AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021

15 ANALYSIS OF NET ASSETS BETWEEN FUNDS

Group	2021			2020		
	Restricted US\$	Unrestricted US\$	Totals 2021 US\$	Restricted US\$	Unrestricted US\$	Totals 2020 US\$
Tangible fixed assets	193,212	2,323,022	2,516,234	297,622	2,547,137	2,844,759
Intangible assets	-	32	32	-	102	102
Deferred tax asset	-	-	-	-	70,004	70,004
Biological assets	-	133,683	133,683	-	26,494	26,494
Grant debtors	1,164,171	-	1,164,171	955,421	197,441	1,152,862
Other debtors	684,209	639,377	1,323,586	318,493	869,677	1,188,170
Cash at bank and in hand	13,104,383	6,824,315	19,928,698	11,028,254	6,298,632	17,326,886
Inventories	-	760,894	760,894	-	436,364	436,364
Capital Grant	-	(1,277,933)	(1,277,933)	-	(1,282,308)	(1,282,308)
Current Tax Payable	-	-	-	-	(3,061)	(3,061)
Creditors due within one year	(373,429)	(1,094,833)	(1,468,262)	(564,669)	(1,270,232)	(1,834,901)
Provisions for liabilities	-	-	-	-	-	-
Grant creditors	-	(628,302)	(628,302)	(9,685)	-	(9,685)
Deferred tax liability	-	(83,724)	(83,724)	-	-	-
	<u>14,772,546</u>	<u>7,596,531</u>	<u>22,369,077</u>	<u>12,025,436</u>	<u>7,890,250</u>	<u>19,915,686</u>
Charity						
	Restricted US\$	Unrestricted US\$	Totals 2021 US\$	Restricted US\$	Unrestricted US\$	Totals 2020 US\$
Tangible fixed assets	193,212	34,772	227,984	297,623	40,392	338,015
Intangible assets	-	-	-	-	-	-
Investment in subsidiaries	-	36,719	36,719	-	12,556	12,556
Loans to group companies	-	1,002,973	1,002,973	-	940,012	940,012
Grant debtors	1,164,171	-	1,164,171	955,421	-	955,421
Other debtors	684,209	584,258	1,268,467	318,493	441,103	759,596
Cash at bank and in hand	13,104,383	5,938,206	19,042,589	11,028,253	6,124,993	17,153,246
Creditors due within one year	(373,429)	(791,778)	(1,165,207)	(564,669)	(801,991)	(1,366,660)
Grant creditors	-	-	-	(9,685)	-	(9,685)
	<u>14,772,546</u>	<u>6,805,150</u>	<u>21,577,696</u>	<u>12,025,436</u>	<u>6,757,065</u>	<u>18,782,501</u>

AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021

16. NET CASH GENERATED FROM OPERATING ACTIVITIES

	Group Consolidated 2021 US\$	Group Consolidated 2020 US\$	Charity 2021 US\$	Charity 2020 US\$
Reconciliation of net income for the year to net cash generated from operations				
(a) Net income for the year	2,319,906	1,588,431	2,795,195	2,761,033
<u>Adjustments for:</u>				
Depreciation	184,657	240,432	154,550	156,988
Amortisation	69	3,035	-	2,892
Loss / (Gain) on disposal of equipment	(12,409)	(32,181)	918	(26,205)
Interest received	(19,792)	(37,568)	(16,325)	(27,729)
Tax for year	-	-	-	-
Write-off of provision for liabilities	-	-	-	-
Current tax receivable	-	-	-	-
Movement in deferred grant	-	(599,393)	-	-
Movement in capital grant	(4,375)	(75,472)	-	-
Working capital changes:				
(Increase) / decrease in grants debtors	(11,309)	(136,164)	(208,750)	61,277
Increase / (decrease) in grants creditors	618,617	-	(9,685)	-
(Increase) / decrease in other debtors	(135,416)	217,728	(508,872)	73,255
(Decrease) / increase in other creditors	(366,639)	360,911	(201,453)	133,522
(Increase) in inventories	(323,387)	(12,563)	-	-
Net cash provided by operating activities	<u>2,249,922</u>	<u>1,517,196</u>	<u>2,005,578</u>	<u>3,135,033</u>

	At 1 January 2020 US\$	Cashflow 2020 US\$	At 31 December 2020 US\$	Cashflow 2021 US\$	At 31 December 2021 US\$
Analysis of funds: Group					
Cash	6,593,651	(3,007,288)	3,586,363	2,118,156	5,704,519
Short term deposits	8,512,608	5,227,915	13,740,523	483,656	14,224,179
Analysis of funds: Charity					
Cash	5,838,123	(2,425,399)	3,412,724	1,405,686	4,818,410
Short term deposits	8,512,608	5,227,915	13,740,523	483,656	14,224,179

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021**

17. INCORPORATION/REGISTRATION

The Foundation is incorporated and registered as a private company limited by guarantee and not having a share capital. It has been registered in the United Kingdom (January 2003) and in Kenya (April 2003), respectively. It was registered as a charity in England and Wales in January 2005. It was granted host country status by the Government of Kenya in June 2005.

18. GOVERNANCE COSTS

	2021 US\$	2020 US\$
Honoraria	36,466	40,350
Meeting expenses	32,568	11,994
Consulting and other services (note 5)	203,258	137,211
	<u>272,292</u>	<u>189,555</u>

19. PENSION COMMITMENTS

The assets of the defined contribution pension scheme are held separately from those of the company in a range of funds provided and administered by an independent plan provider. Contributions of US\$344,750 (2020: US\$323,564) were charged to the statement of financial activities during the financial year as they became payable in accordance with the rules of the scheme. There are no outstanding contributions at the current year-end (2020: US\$ nil).

20. FINANCIAL INSTRUMENTS

	Group Consolidated 2021 US\$	Group Consolidated 2020 US\$	Charity 2021 US\$	Charity 2020 US\$
FINANCIAL ASSETS				
Cash and receivables	22,416,455	19,470,477	21,475,227	18,868,264
	<u>22,416,455</u>	<u>19,470,477</u>	<u>21,475,227</u>	<u>18,868,264</u>
	Group Consolidated 2021 US\$	Group Consolidated 2020 US\$	Charity 2021 US\$	Charity 2020 US\$
FINANCIAL LIABILITIES				
Financial liabilities measured at amortised cost	2,096,564	1,847,647	1,165,207	1,376,345
	<u>2,096,564</u>	<u>1,847,647</u>	<u>1,165,207</u>	<u>1,376,345</u>

Financial assets measured at amortised cost comprise cash and cash equivalents, trade debtors and other receivables.
Financial liabilities measured at amortised cost comprise trade and other creditors.

AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021

21. INVESTMENTS IN SUBSIDIARIES

The following table lists the entities which are controlled by the group, either directly or indirectly through subsidiaries.

Company

	Carrying amount 2021	Carrying amount 2020
Agridrive Nigeria Limited	2,777	2,777
QBS Seeds Company Limited	9,779	9,779
ECOBASIC Seeds Company Limited	24,163	-
	36,719	12,556

The above amount relates to share capital held by AATF in QBS (US\$ 9,779), Agridrive (US\$ 2,777) and ECOBASIC Seeds Company (US\$24,163).

Summarised consolidated statement of financial position as at 31 December

	Qualibasic Seed Company Limited		Agridrive Nigeria Limited		ECOBASIC Seeds Company Ltd		Total	
	2021	2020	2021	2020	2021	2020	2021	2020
	US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$
Assets								
Non-current assets	1,326,422	1,443,212	911,097	1,253,768	171,134	-	2,408,653	2,696,980
Current assets	2,283,493	1,374,423	92,432	72,350	411,081	-	2,787,006	1,446,773
Total Assets	3,609,915	2,817,635	1,003,529	1,326,118	582,215	-	5,195,659	4,143,753
Liabilities								
Non-current liabilities	1,066,075	59,750	499,865	459,805	-	-	1,565,940	519,555
Current liabilities	1,392,129	1,598,342	225,347	402,829	386,620	-	2,004,096	2,001,171
Total liabilities	2,458,204	1,658,092	725,212	862,634	386,620	-	3,570,036	2,520,726
Total net assets (liabilities)	1,151,711	1,159,543	278,317	463,484	195,595	-	1,625,623	1,623,027
Carrying amount of non-controlling interest	(211)	(6,110)	-	-	-	-	(211)	(6,110)

Summarised statement of profit or loss and other comprehensive income for the year ended 31 December

	Qualibasic Seed Company Limited		Agridrive Nigeria Limited		ECOBASIC Seeds Company Ltd		Total	
	2021	2020	2021	2020	2021	2020	2021	2020
	US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$
Revenue	647,043	869,029	732,474	1,509,253	-	-	1,379,517	2,378,282
Other income and expenses	(874,317)	(293,961)	(876,922)	(1,561,725)	3,227	-	(1,748,012)	(1,855,686)
Loss before tax	(227,274)	575,068	(144,448)	(52,472)	3,227	-	(368,495)	522,596
Tax expense	(67,195)	(718,025)	(92,007)	(85,868)	(2,976)	-	(162,178)	(803,893)
(Loss) / Profit after tax	(294,469)	(142,957)	(236,455)	(138,340)	251	-	(530,673)	(281,297)
Other comprehensive income	317,184	(239,174)	-	-	-	-	317,184	(239,174)
Total comprehensive income	22,715	(382,131)	(236,455)	(138,340)	251	-	(213,489)	(520,471)

AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021

21. INVESTMENTS IN SUBSIDIARIES (CONTINUED)

Summarised statement of cash flows for the year ended 31 December

	Qualibasic Seed Company Limited		Agridrive Nigeria Limited		ECOBASIC Seeds Company Ltd		Total	
	2021	2020	2021	2020	2021	2020	2021	2020
	US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$
Cashflows from operating activities	720,754	(206,356)	(84,422)	512,077	(21,005)	-	615,327	305,721
Cashflows from investing activities	(100,677)	(141,040)	18,978	(558,186)	(174,317)	-	(256,016)	(699,226)
Cashflows from financing activities	(210,387)	56,187	62,809	41,068	195,348	-	47,770	97,255
Net increase / (decrease) in cash and cash equivalents	409,690	(291,209)	(2,635)	(5,041)	26	-	407,081	(296,250)

Subsidiaries with material non-controlling interests

The following information is provided for subsidiaries with non-controlling interests which are material to the reporting company. The summarised financial information is provided prior to intercompany eliminations.

Subsidiary	Country of incorporation	% Ownership interest held by non-controlling interest	
		2021	2020
Agridrive Limited	Nigeria	1%	1%
Qualibasic Seed Company Limited	Kenya	1%	1%

AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021

22. GRANTS TO SUBGRANTEES

	Group		Company	
	2021 US\$	2020 US\$	2021 US\$	2020 US\$
COWPEA				
INERA - Burkina Faso	56,958	-	56,958	-
IAR - Zaria, Nigeria	68,976	94,074	68,976	94,074
CSIRO - Australia	325,263	-	325,263	-
CSIR - SARI, Ghana	57,717	94,982	57,717	94,982
Donald Danforth	286,470	-	286,470	-
NAERLS, Nigeria	41,076	74,800	41,076	74,800
Total COWPEA	836,460	263,856	836,460	263,856
CAMAP				
ZARI, Zambia	-	55,000	-	55,000
NaCRRRI, Uganda	-	28,662	-	28,662
Total CAMAP	-	83,662	-	83,662
HYBRID RICE				
HEAL	723,533	320,308	723,533	320,308
aWhere Inc	-	-	-	-
TARI, Tanzania	-	4,740	-	4,740
Total HYBRID RICE	723,533	325,048	723,533	325,048
NEWEST RICE				
CIAT	52,200	-	52,200	-
Arcadia Biosciences, USA	-	-	-	-
NaCRRRI - Uganda	32,000	64,000	32,000	64,000
NCRI - Nigeria	-	90,000	-	90,000
CRI, Ghana	-	62,000	-	62,000
Donald Danforth	-	245,346	-	245,346
Total NEWEST RICE	84,200	461,346	84,200	461,346
SEEDS2B				
Makerere University, Uganda	-	8,000	-	8,000
NARO Holdings	-	7,800	-	7,800
CEDO - Uganda	-	3,000	-	3,000
NaCRRRI - Uganda	-	20,443	-	20,443
NaSARRI - Uganda	-	5,000	-	5,000
DARS	6,000	15,400	6,000	15,400
Agri Capital	-	1,800	-	1,800
Total SEEDS2B	6,000	61,443	6,000	61,443
STRIGA				
CIMMYT, Colombia	-	37,463	-	37,463
Total STRIGA	-	37,463	-	37,463
POTATO				
CIP, Kenya	15,000	60,000	15,000	60,000
Total POTATO	15,000	60,000	15,000	60,000
OFAB				
OFAB Kenya, ISAAA	150,000	349,290	150,000	349,290
OFAB Uganda, UNCST	100,000	100,000	100,000	100,000
OFAB Nigeria, NABDA	200,000	200,000	200,000	200,000

AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021

22. GRANTS TO SUBGRANTEES

	Group		Company	
	2021 US\$	2020 US\$	2021 US\$	2020 US\$
OFAB Tanzania, COSTECH	100,000	100,000	100,000	100,000
OFAB Ethiopia, EIAR	150,000	150,000	150,000	150,000
OFAB Burkina Faso, INERA	120,000	120,000	120,000	120,000
OFAB Ghana, CSIR	100,000	100,000	100,000	100,000
Total OFAB	920,000	1,119,290	920,000	1,119,290
TAAT				
IITA, Nigeria	99,267	184,468	99,267	184,468
USTA, Senegal	-	2,651	-	2,651
CORAF, Senegal	47,034	-	47,034	-
Farm Inputs Care Centre (FICA), Uganda	-	4,200	-	4,200
Rural O Programme (ROP), Kenya	-	1,194	-	1,194
NaCRRI, Uganda	3,930	-	3,930	-
NARO Holdings, Uganda	9,170	-	9,170	-
KALRO, Kenya	13,860	5,978	13,860	5,978
INRAB	-	4,357	-	4,357
Market Matters Inc., USA	-	135,680	-	135,680
Tasai Inc., USA	75,487	-	75,487	-
Total TAAT	248,748	338,528	248,748	338,528
TELA				
KALRO, Kenya	97,852	263,848	97,852	263,848
Bayer, USA	1,114,233	1,750,172	1,114,233	1,750,172
TARI, Tanzania	-	5,645	-	5,645
EIAR, Ethiopia	192,430	98,034	192,430	98,034
Biotechnology Society (BST), Tanzania	-	20,364	-	20,364
CIMMYT, Mexico	510,509	502,182	510,509	502,182
ARC, South Africa	-	377,755	-	377,755
IAR, Nigeria	68,353	157,011	68,353	157,011
Total TELA	1,983,377	3,175,011	1,983,377	3,175,011
QBS				
QBS Company Kenya	1,294,333	394,333	1,294,333	394,333
QBS from AATF to QBS	(224,287)	(1,177,739)	-	-
Grant from AATF to ECOBasic Seeds	(185,437)	-	-	-
Total QBS	884,609	(783,406)	1,294,333	394,333
Total Sub-grants	5,700,927	5,142,241	6,110,651	6,319,980

23. POST BALANCE SHEET EVENTS

There are no post-balance sheet events to be reported in the current reporting period.

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021**

24. DEFERRED GRANT

Deferred income relates to income granted by BMGF through the Foundation to fund activities of its subsidiary, QBS Kenya Ltd. The grant is recognised as grant income when expenses relating to it have been incurred. The amount in deferred grant relates to the portion of funds sub-granted but not yet expended as at 31 December 2019. However, in the 2020 financial year, QBS Kenya Ltd had expended an amount of US\$197,441 over and above the disbursements received. This has been reported together with the Foundation's grant debtors in note 10 above.

	Group 2021* US\$	Group 2020 US\$	Charity 2021 US\$	Charity 2020 US\$
Opening balance	(197,441)	(599,393)	-	-
Grant disbursed	1,258,166	(390,867)	-	-
Expenses incurred against the grant	(373,638)	1,064,399	-	-
Assets purchased from the grant	(175,873)	79,959	-	-
Offset - amount receivable from shareholder	117,088	43,343	-	-
	<u>628,302</u>	<u>(197,441)</u>	<u>-</u>	<u>-</u>

* In 2021, the deferred grant was in a positive position to the tune of US\$628,302. This amount has been combined with the charity's grant creditors' amount and reported under note 10 above.

25. INVENTORIES

Inventory items are made up of the following:

	Group 2021 US\$	Group 2020 US\$	Charity 2021 US\$	Charity 2020 US\$
Packaging materials	17,764	15,953	-	-
Hybrid maize	552,481	316,908	-	-
Inventory - fertilisers	-	497	-	-
Inventory - herbicides	11,866	16,977	-	-
Inventory - insecticides	15	73	-	-
Inventory other	178,768	85,956	-	-
	<u>760,894</u>	<u>436,364</u>	<u>-</u>	<u>-</u>

26. RELATED PARTIES

Related party balances

Receivables - Related parties

	Group 2021 US\$	Group 2020 US\$	Charity 2021 US\$	Charity 2020 US\$
Agridrive Nigeria Limited	-	-	172,042	73,392
Qualibasic Seed Company Limited	-	-	32,056	100,246
ECOBASICSEEDS	-	-	333,207	-
	<u>-</u>	<u>-</u>	<u>537,305</u>	<u>173,638</u>

**AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2021**

26. RELATED PARTIES

Loans to group companies

	Group 2021 US\$	Group 2020 US\$	Charity 2021 US\$	Charity 2020 US\$
Agridrive Nigeria Limited	-	-	1,002,973	940,012
	<u>-</u>	<u>-</u>	<u>1,002,973</u>	<u>940,012</u>

Related party transactions

Payments to (by) related parties (including sub-grants disbursed / (owing)) – refer to Note 22

	Group 2021 US\$	Group 2020 US\$	Charity 2021 US\$	Charity 2020 US\$
Qualibasic Seed Company Limited	1,070,046	(783,406)	1,294,333	394,333
ECOBASICSEEDS	(185,437)	-	-	-
	<u>884,609</u>	<u>(783,406)</u>	<u>1,294,333</u>	<u>394,333</u>