



Better tools
Better harvests
Better lives



AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION
FONDATION AFRICAINE POUR LES TECHNOLOGIES AGRICOLES



Meeting a Critical Need

Since its establishment in 2003, the African Agricultural Technology Foundation (AATF) has been addressing a critical challenge for agriculture in Sub-Saharan Africa: **Access and Delivery of Technology.**

AATF is meeting this challenge by **building partnerships** with both **public** and **private sectors** to access, adapt and deliver **appropriate agricultural technologies** for use by **smallholder farmers** in Sub-Saharan Africa. These partnerships bring together the best academic, science and business expertise with experiences and indigenous knowledge of African farmers.

AATF is about **African farmers** and linking them with **practical, technological solutions**. Use of appropriate technology is key to reversing the low **agricultural productivity** in Africa and unlocking the **potential of African smallholders**. These technologies vary depending on the priority needs identified by farmers and can include **chemical, mechanical, biological, biotechnological** and **process-based solutions**.

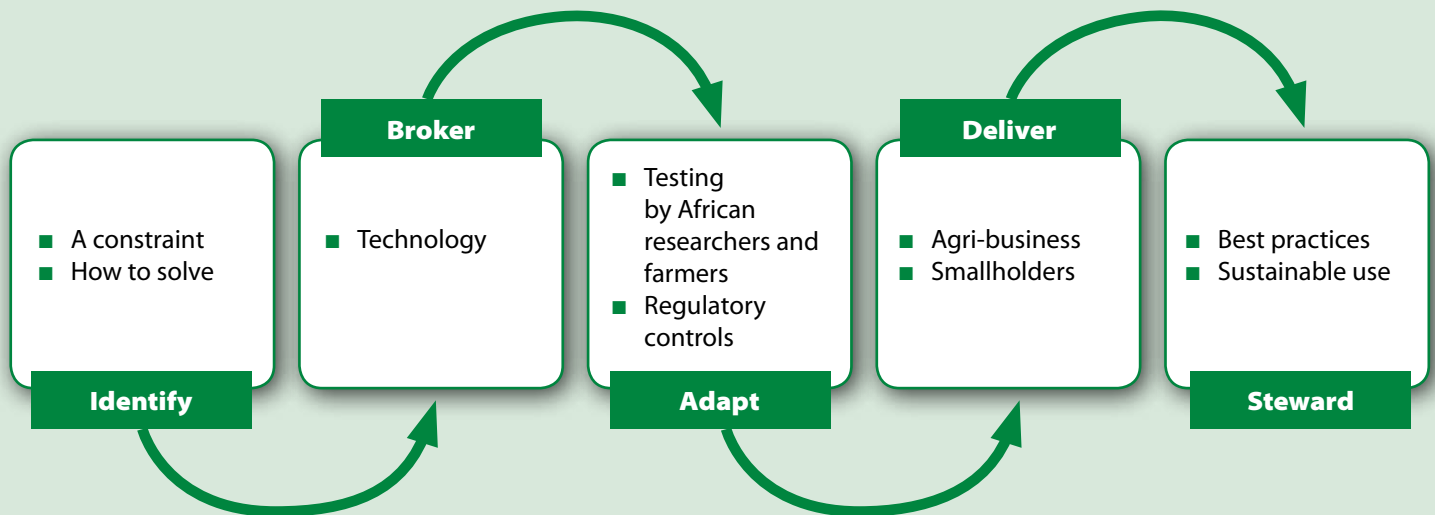
“ *We should remember that these kinds of investments not only save lives, improve livelihoods, and promote stability – they also save money in the long run. These are long-term efforts that require long-term commitments.* ”

-Bill Gates on accepting World Food Programme's USA McGovern Leadership Award

Advancing Practical Technology Solutions

Any meaningful effort to secure Africa's future must address the persistent low agricultural productivity. Better access to **agricultural technologies** will enable African farmers to boost productivity and reduce hunger and poverty without significantly expanding land under cultivation. In that sense, agricultural technology can play a major role in developing a sustainable approach to intensification of agricultural production and realisation of the vision of prosperous farmers and a food secure Africa. AATF believes **African farmers deserve access to the same technologies** available to farmers elsewhere in the world as they shoulder the burden of feeding a rapidly growing population.

AATF is uniquely positioned to advance and manage the entire technology transfer process from identification to delivery. We...

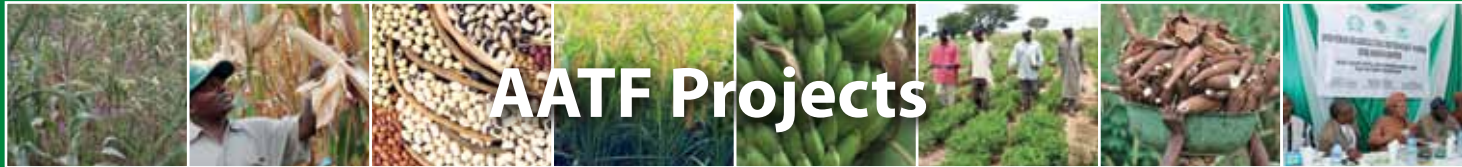


AATF is showing real promise and is a problem solver in bringing innovative technologies to smallholder farmers in an accessible, sustainable form.

*-Sir Gordon Conway
Agriculture for Impact*



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AATF Projects

1. *Striga* Control in Maize – Controlling a noxious weed that reduces maize yields

Often known as witchweed, *Striga* really should be called ‘vampire’ weed. It literally sucks the life out of a farmer’s maize plants, and affects the livelihoods of nearly 100 million farmers across Sub-Saharan Africa. AATF is working with partners to provide farmers with an affordable and simple innovation: herbicide-resistant maize seed coated with Imazapyr herbicide that kills *Striga* seeds on contact. These varieties are increasing yields by 300 percent (from 0.5 to 1.5 tonnes/ha) and improving income by US \$ 400 per season, per hectare.

Striga Control in Maize pilot countries: Kenya, Uganda, Tanzania

2. Water Efficient Maize for Africa – Protecting maize against drought and insect damage

Amidst alarming predictions that hotter, drier weather caused by climate change could devastate African maize production, AATF and partners are developing Water Efficient Maize for Africa or WEMA. Using conventional and transgenic approaches WEMA varieties are being endowed with water-conserving and insect protection traits that are capable of boosting harvests by 20 to 35 percent under moderate drought conditions.

WEMA pilot countries: Kenya, Uganda, Tanzania, Mozambique, South Africa

3. Pod-borer Resistant Cowpea – Developing a *Maruca*-resistant cowpea

Cowpea is a nutritious legume that is a staple for 200 million people across Sub-Saharan Africa. *Maruca vitrata*, a common pod borer that infests cowpea, ruins up to 70 to 80 percent of harvests and is common across 12.5 million hectares of farmland in Africa. AATF is working with partners to develop and test cowpea varieties with a genetic trait that will make the plant resistant to the borer and provide farmers with an alternative to costly and hazardous insecticide sprays. New varieties are expected to improve nutrition and food security for about 8 million farmers.

Cowpea Improvement pilot countries: Nigeria, Ghana, Burkina Faso, Malawi

4. Bacterial Wilt Resistant Banana – Addressing Africa’s wilting banana production

Bananas and plantains are a major source of food and income for 50 million African farmers in the Great Lakes region. Currently a disease known as banana bacterial wilt, has slashed incomes and yields especially in Uganda, where annual losses are reported at US \$200 million. AATF has brokered access to a genetic trait that makes bananas resistant to the wilt and is working with partners to develop new varieties that could bring banana production in Africa back from the brink of disaster.

Banana Bacterial Wilt pilot countries: Uganda, Kenya

5. Nitrogen-Use Efficient, Water-Use Efficient & Salt Tolerant Rice – Improving rice productivity in Africa

Rice production in Africa has surpassed production, requiring many countries to spend over US \$5 billion in rice imports. Many regions suitable for expanding rice production, suffer from nitrogen-depleted, salty soils and water scarcity. AATF is working with private sector agricultural companies and African research institutions to develop improved rice varieties with enhanced agronomic traits that will increase yields by about 15 percent and optimise the use of marginal farm land and water.

NEWEST pilot countries: Ghana, Nigeria, Uganda

6. Aflatoxin Control in Maize and Peanuts – Protecting harvests from deadly fungus

Smallholder farmers in Africa do not have sufficient resources to control aflatoxin, a naturally occurring yet highly toxic and cancer-causing poison commonly found in grains—particularly maize and peanuts. AATF, together with partners are working to develop and distribute aflasafe™, the first biological control technology designed for aflatoxin strains indigenous to Africa. It has the potential to protect the health of 4.5 million farmers, consumers and livestock and decrease the cancer-causing poison in grains and improve trade.

Aflatoxin Control pilot countries: Kenya, Senegal

7. Cassava Mechanisation and Agro-processing – Accelerating cassava harvesting and processing

One of the constraints to cassava production in Africa is lack of appropriate machinery for planting, harvesting and processing. AATF is brokering access to cassava mechanisation and agro-processing equipment to facilitate the African-based development of the equipment and use by farmers to accelerate harvesting and processing. The project has the potential to reach over one million farmers and their families, increase yields from the current average of 9 tonnes/ha to 25 tonnes / ha, and enhance labour productivity.

Cassava Mechanisation pilot countries: Zambia, Nigeria, Uganda

8. Hybrid Rice: Breeding by Design – Developing hybrid rice with significant yield advantage

To improve food security and rural livelihood among African small-scale rice producers, AATF with partners are developing hybrid rice, that has significant yield advantage that will create a sustainable hybrid rice system and agro-businesses to support rice farming in East, West and Southern Africa. The project is also developing a web based tool that will assist in determining precise relationships between yield, environment and genetics for better rice production.

Hybrid rice pilot countries: Kenya, Tanzania

9. Open Forum on Agricultural Biotechnology in Africa – Supporting awareness and education on biotechnology

This is a platform that brings together stakeholders in biotechnology and enables interactions between scientists, journalists, the civil society, industrialists, lawmakers, farmers and policy makers. It is a forum that provides an opportunity for key stakeholders to know one another, share knowledge and experiences, make new contacts and explore new avenues that will bring the benefits of biotechnology to the African agricultural sector.

OFAB pilot countries: Kenya, Uganda, Nigeria, Tanzania, Ghana, Burkina Faso, Zimbabwe, Ethiopia

10. Seeds2B – Making seeds available at the right time, place and price

To make seeds available at the right time, right place and right price, AATF and partners are providing a unique business model that will enable international and African based technology owners with appropriate technologies to licence their products to seed companies in Africa to engender agricultural transformation in Sub-Saharan Africa.

Seeds2B pilot countries: Malawi, Zimbabwe

Enabling Initiatives

We also coordinate several enabling efforts to support our overall work. These include monitoring trends and the provision of advisory services in the development of:

1. Regulatory frameworks

2. Seed systems

3. Intellectual Property regimes

4. Research and development

Our projects address constraints affecting 160 million households and focus on the most important food and high priority crops for smallholder farmers and their families: bananas, cassava, cowpea, peanuts, maize and rice.

A Commitment to African Farmers and their Families



Agriculture employs nearly 65% of the labour-force in Africa but it accounts for only 30% of GDP
World Bank, 2008



AATF is committed to ensuring resource constrained farmers in Sub-Saharan Africa have better tools, which will contribute to better harvests and better lives through:

- Improved and stabilised yields that will enable farmers to plan for the future
- Increased income and a better quality of life
- Enhanced nutrition levels contributing to a healthier, more food secure Africa
- On-farm efficiencies and better environments with reduced chemical use
- Mitigating effects of climate change
- Developing sustainable business-based solutions
- Building regional capacity for science by supporting national research and extension systems and raising awareness on technology options

Building on Strong Foundations

AATF is an independent, non-profit organisation committed to delivering agricultural innovations to Africa's challenged but resilient farmers through public private partnerships. By uniting key stakeholders, AATF has positioned technology transfer as a priority solution for agricultural constraints in Africa.

Investors and partners

The Rockefeller Foundation, United Kingdom Department for International Development (DFID) through UK aid, and the United States Agency for International Development (USAID) were the original funders of AATF. The funding they provided enabled the establishment of the Foundation, initiation and implementation of projects, and building capacity to leverage additional support from other investors for both core and projects. The Bill & Melinda Gates Foundation and PepsiCo have also previously provided core funding for operational support.



UK aid from the UK government provides core funding that supports the Foundation's operations such as building institutional capacity and strengthening corporate governance. It partially supports some projects, complementing project funding from other investors and wholly funds others.



USAID supports the Nitrogen-Use Efficient, Water-Use Efficient, Salt-Tolerant Rice Project; Pod-Borer Resistant Cowpea Project; and the Water Efficient Maize for Africa (WEMA) project. It also supports the Striga Control in Maize

project under Feed the Future Partnering for Innovation.



The Bill & Melinda Gates Foundation supports the WEMA, Open Forum on Agricultural Biotechnology in Africa and the Hybrid Rice: Breeding by Design projects.



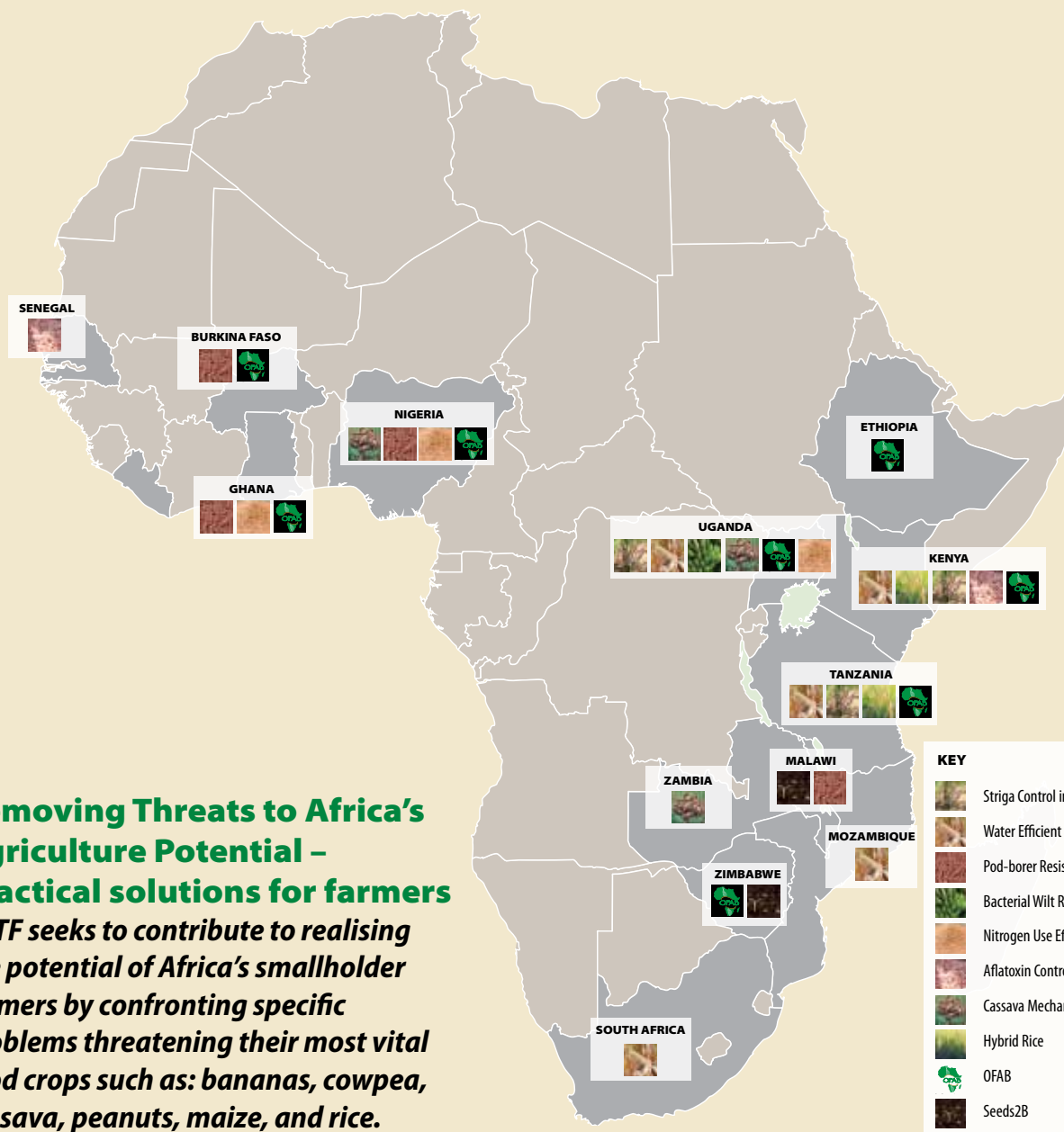
Howard G. Buffett Foundation supports the WEMA project.



Syngenta Foundation for Sustainable Agriculture supports the Seeds2B project.

AATF partners include African national agricultural research and extension institutions • national governments • African seed traders, agribusiness, community based, non-governmental, and farmer organisations • leading industry technology developers and • major international research organisations, and research centers affiliated with the Consultative Group on International Agricultural Research (CGIAR).

Where we work



Removing Threats to Africa's Agriculture Potential – Practical solutions for farmers

AATF seeks to contribute to realising the potential of Africa's smallholder farmers by confronting specific problems threatening their most vital food crops such as: bananas, cowpea, cassava, peanuts, maize, and rice.

Our priority problem areas

- Impact of climate change on agriculture
- Pest management
- Soil management
- Nutrient enhancement in foods
- Improved breeding methods
- Mechanisation

What we want for our farmers

A prosperous and food secure Africa

What we are doing for our farmers

Accessing, developing, adapting and delivering appropriate agricultural technologies for sustainable use by smallholder farmers in Sub-Saharan Africa, through innovative partnerships and effective stewardship along the entire value chain

For more information contact:



African Agricultural Technology Foundation

P O Box 30709-00100, Nairobi, Kenya

Tel: +254 – (0) 20-4223700 | Fax: +254 – (0) 20-4223701

Email: aatf@aatf-africa.org | Website: www.aatf-africa.org