




Launch of
The African Agricultural
Technology Foundation (AATF)

ILRI Campus, Nairobi, Kenya – 16 June 2004

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All protocol observed.

The start up of most human endeavours is usually a happy occasion, a time of joy, a moment to celebrate. Like when a child is born, parents, family and friends come together to rejoice, to welcome the child into their midst, to wish the child well. It is a moment of hope and great expectations that the child will grow into a healthy and successful member of the society, even though the success of the child may mean different things to different people.



So here we are on this 16th day of June 2004 witnessing the launching of the African Agricultural Technology Foundation, should I say the birth of AATF. We have come from far and near, parents, family and friends, to celebrate the birth of AATF and to wish it well, each one of us expecting a great many achievements from this child.

It is a child of Africa, conceived by Africans, in consultation with many people and institutions of goodwill from around the world. It has been given a home in the beautiful land of Kenya, world famous for its abundant wildlife and unforgettable safaris, with immaculate beaches, luxurious vegetation, dry lands, numerous lakes and volcanoes, home of the Rift Valley where maybe humanity itself began. But for me the beauty of Kenya is in its people, who have embraced modernity while preserving their culture, the people who call their land “nchi ya amani, ya watu wenye bidii, ya wapenda maendeleo”, the land of peace, hard work and progress. What a wonderful place for AATF to be born and to grow!

AATF is a child or grandchild of farmers. Those who conceived it are farmers or sons and daughters of farmers. Aren't we all? Seventy percent of Africans live in rural areas where they depend on the land for their livelihoods. So, as a child of farmers, AATF will have to identify itself with farmers and make their problems its own priority, its only priority.

AATF is a child of scientists who have dedicated their lives to harnessing the power of science and technology to solve the problems of mankind in Africa and elsewhere around the world. It is a child of agricultural scientists, development specialists, private entrepreneurs who for many years, have been addressing the problems of food production where food was hard to produce, in a world where demand for food is ever increasing due to high population growth rates and the factors of food production, soil,



water, access to land, seed diversity are changing and not for the better. They understand that agricultural development can not only create wealth, but it can also significantly reduce poverty if agricultural research is properly targeted and given the right policy environment and access to growing markets. They have also understood the importance of selecting technologies that do not harm the environment and will preserve its productive capacity for generations to come.

AATF is a child of people and institutions of goodwill who understand that partnerships and working together create more power than the sum of the power of each partner put together.

We are fortunate that the work of so many national and international research institutions and development organisations has enabled a better understanding of the complexity of problems facing the African farmer. Many of these institutions are represented here today. Their work in the past 50 years has been remarkable indeed.

At the end of the 20th Century, it was evident that the world was becoming polarised between rich and poor nations, the rich getting richer, generating more technologies and increasing their productivity, and the poor getting poorer, having access to less technologies and being unable to increase their capacity to produce food. To this problem of food insecurity, a new one is added: human insecurity, characterised by growing conflicts, displaced persons, new pandemic diseases and the ugly spectre of terrorism.



Africa is confronting threats to both food and human security and it would seem like one feeds the other in a spiral towards chaos. There is, therefore, a greater imperative for the agricultural research community to mobilise the tools needed to increase agricultural productivity in regions such as Africa where prospects for food and human insecurity are greatest. Yet resources available for developing these tools are diminishing due to alternative demands on development funding; and access to existing productivity enhancing tools and processes is becoming increasingly hampered by copyright regulations and trade protectionism.

The African Agricultural Technology Foundation, this baby whose birth we have come to celebrate today, will work with you all, its parents, family and friends, not to duplicate the good work that is already being done, but to facilitate the formation of partnerships and innovative linkages and bring to Africa the tools, technologies and processes that could not have otherwise been obtained, would have taken longer or would have been more expensive to develop, and put them within reach of the African farmer in a way that agricultural productivity can be increased, poverty reduced and the threat to food and human security lowered or eliminated.

Due to weak extension systems, agricultural research institutions operating in Africa are confronted with the multiple tasks of developing, testing and disseminating technologies. AATF proposes to devise innovative approaches for accessing copyrighted and proprietary technologies that complement existing capabilities, and establish effective procedures for technology dissemination, monitoring of technology transfer agreements and assessment of impact deriving from technology deployment. This will require the establishment of novel partnerships, including linkages with technology owners, laboratories in Africa and around the world, farmer and trade associations, the African private sector, non-governmental organisations and community-based associations.



Mr. Minister, Your Excellencies, our Donors, Esteemed Partners and Associates, Dear Farmers, Distinguished Guests, Ladies and Gentlemen.

A sixteen-year-old girl from Ghana, called Isabella Baba, quoted in the IFPRI 2020 Vision booklet published in 2001, said: "Hunger will not take a day to end. It is not going to end tomorrow or the day after. And it is not going to go away suddenly by itself, for nothing good comes easy." So you should not expect a miracle from AATF for tomorrow.

But what can you expect from AATF? I will give you two examples that answer this question.

The first example is the case of cowpea, a legume cultivated all over Africa on more than 12.5 million hectares of land by millions of smallholder farmers and providing up to half the amount of plant protein in the diet of several communities in sub-Saharan Africa. In fact, it is the most important food grain legume in the dry savannas of tropical Africa and is consumed by an estimated 200 million people, mainly in West and Central Africa. However, cowpea greatly suffers from various insect pests, pod borers, pod-sucking bugs and flower thrips in the field and weevils when the grain is in storage. Progress in the improvement of cowpea against these biotic stress has been slow. But now the newly formed Network for the Genetic Improvement of Cowpea in Africa (NGICA) is fostering collaboration between cowpea breeders, economists, molecular biologists, experts in gene mapping and marker-assisted selection, private sector seed company representatives, food scientists, policy experts, entomologists, and intellectual property specialists. The NGICA works closely with the Bean/Cowpea CRSP program of the land-grant universities in the USA.

The various problems of cowpea are being addressed through a combination of conventional breeding and genetic enhancement of the crop. Transformation of cowpea has already been achieved using model genes. We have received word this very morning that Monsanto is willing to make available a gene that could control some pests such as the pod borer *Maruca*. NGICA is already working hard to conventionally breed high-performing cowpea cultivars, while protocols for routine transformation of cowpea are being developed. In the medium term (4-7 years) DNA markers are being developed for tagging lines with the desired genetic traits, so that these can be used in marker-assisted selection. This task is being made easier by the availability of a detailed genetic linkage map of the domesticated cowpea (*Vigna unguiculata*). It will not be before 7 to 10 years that genetically enhanced cowpea could be released to growers. In this effort, the NGICA partners who are spread over Africa, USA and Australia are in contact with one another and sharing information, materials and experience. AATF's role, which will be agreed upon with the NGICA partners, will include negotiating intellectual property to access technologies already existing among various owners in the short-to-medium term; negotiating access to genetically enhanced seeds and the accompanying technologies in the long term; licensing of the product for distribution in the appropriate regions of Africa; acting as licensor/licensee for project activities conducted under NGICA; ensuring seed production and availability through liaison with seed companies licensed to produce the seed; providing liability production protection, as necessary to technology users in Africa; facilitating marker-assisted selection work on cowpea; developing markets by linking producers, traders and consumers.

The second example concerns the involvement of AATF in the project to control *Striga*, which was showcased with posters from the various AATF partners, CIMMYT, KARI,



BASF, ICIPE and TSBF. *Striga* is a parasitic weed that infects all the major cereals and covers between 20 and 40 million hectares of farmland in Africa. *Striga* damage to crops is estimated at US\$1 billion per year, thus depriving over 100 million people in sub-Saharan Africa of food which has to be provided by food aid or importation (Berner et al. 1995. *Striga* research and control: A perspective from Africa. *Plant Dis.* 79: 652–660).

Here is an example of what can be done: there is a herbicide called imidazolinone produced by BASF that kills plants but is safe for humans and animals. Through conventional breeding, Pioneer Hi-Bred International developed a maize line resistant to the herbicide; the line was donated to CIMMYT which derived herbicide-resistant varieties adapted to different agro-ecological regions of Africa and, working with BASF and the Weizmann Institution, has derived the right formulation for coating maize seeds with the herbicide. When the coated maize seed is planted, no *Striga* emerges for the whole season. KARI tested and validated the technology. In 2003, five of these conventionally bred maize varieties entered the Kenya National Productivity Trials, which is the normal process before new varieties are released to farmers. AATF, in close collaboration with CIMMYT, accepted the challenge of negotiating technology licensing and regulatory approval for the whole technology package. We will need to have a firm understanding of different legal issues, and players, involved in access, transfer and stewardship of this technology, right through to the time when a small holder farmer using the technology is ready to sell excess crop in the “open” market, which should happen within the next three to five years.



This technology is ready for dissemination not only in Kenya, but also in Tanzania, Malawi, Zimbabwe, Uganda and Ethiopia. It allows yield increases of 30-80% over the use of traditional maize varieties. Using estimates made in 2002 in Kenya, the additional maize output in Western Kenya alone is estimated to be about 62,000 MT with a value of US\$5.3 million.



These two examples highlight the complexity of interactions that are necessary to tackle some of the most intractable problems of African agriculture and the associated intellectual property right issues. Yet without these interactions and without resolving the IPR issues, progress towards solving these problems will be slow to come, if they come at all.

In the next ten to fifteen years, AATF should have succeeded in building those partnerships around selected technologies in the eight priority areas selected by its Board of Trustees, and in significantly increasing farmers’ productivity and raising their income generation capacity. It will have demonstrated that the AATF model has great potential, and eventually other similar initiatives will be developed, because true to the wisdom of the sixteen year old Isabella Baba of Ghana, it will take more than AATF to end hunger in Africa.

Mr. Minister, Your Excellencies, our Donors, Esteemed Partners and Associates, Dear Farmers, Distinguished Guests, Ladies and Gentlemen.

This is what can be expected of AATF whose birth you have come to celebrate today. In Africa, it takes a village to raise a child. AATF is your child – farmers, governments, continental and sub-regional organisations, national and international research institutions, development agencies, extension systems, non-governmental and community-based organisations, private entrepreneurs concerned about the sustainability of the supply of agricultural commodities, AATF will need you to grow, develop its strength, and work with you and for you.



The AATF staff is small and will remain small, but it will leave no stone unturned in its efforts and dedication to build partnerships to assess the critical needs of farmers, identify and negotiate access to technologies that address those needs, bring them to Africa in accordance with established laws and regulations, deploy them in collaboration with the right partners in a way that they generate the desired impact of poverty reduction and rural development to the intended beneficiaries.

We, the AATF staff, promise you to do one thing: we will attend to our mandate, and will meet or exceed your expectations. With the staff determination and resolve, with your support and collaboration, we shall succeed.

