



KENYA TOP TEN FACTS ABOUT AGRI-BIOTECH & BIOSAFETY BY 2015

**Celebrating the 20th Anniversary
of Commercialization of Biotech
Crops (1996-2015)**



FACT 1

Kenya has the capacity needed to regulate biotech/GM crops



1. The government's keenness towards application of agri-biotech was first demonstrated in 2003 when Kenya became the first country to sign the Cartagena Protocol on Biosafety. This was shortly followed by the approval of a National Policy on Biotechnology Development in 2006. The policy charts a vision towards development and safe application of biotechnology.
2. In 2009, Kenya enacted its biosafety legislation - Biosafety Act No.2 of 2009. The Act lays down legal and institutional frameworks for governing modern biotechnology. It was consultatively developed to ensure the country maximizes benefits while safeguarding against any potential risks of the technology.
3. The Biosafety Act paved way for establishment of the National Biosafety Authority (NBA), which was officially inaugurated in May 2010. The Authority is mandated to conduct overall supervision and monitoring of GMO research and commercialization activities, and works closely with eight (8) other regulatory agencies. So far, NBA has published four sets of biosafety regulations to govern various aspects of GMOs. As of December 2015, the authority had handled a total of 21 applications for contained use, 12 applications for confined field trial, 2 for environmental release and 28 for trans-boundary movement for humanitarian assistance and relief supplies.

You can download a booklet that gives more details about the law and regulations on:
<http://africenter.isaaa.org/wp-content/uploads/2015/05/Kenya-Top10-Facts-A4-Dark-Web-Version-amended.pdf>

FACT 2

For the very first time, two applications for open field cultivation of GM maize and cotton were processed.



NATIONAL BIOSAFETY AUTHORITY

PUBLIC NOTICE

REQUEST FOR COMMENTS ON AN APPLICATION FOR ENVIRONMENTAL RELEASE (OPEN FIELD CULTIVATION) OF GENETICALLY ENGINEERED MAIZE IN KENYA

46 | **DAILY NATION**
Friday November 20, 2015



NATIONAL BIOSAFETY AUTHORITY

PUBLIC NOTICE

REQUEST FOR COMMENTS ON AN APPLICATION FOR ENVIRONMENTAL RELEASE (OPEN FIELD CULTIVATION) AND PLACING ON THE MARKET OF GENETICALLY ENGINEERED COTTON IN KENYA.

1. The insect resistant (Bt) maize application under the Water Efficient Maize for Africa (WEMA) project was made jointly by Kenya Agricultural and Livestock Research Organization (KALRO) and the African Agricultural Technology Foundation (AATF) in mid-2015.
2. In February 2016, NBA granted an approval, with conditions, on the insect resistant Bt-WEMA maize application. The conditional approval is part of a routine regulated research process in line with national policies and laws.
3. Although other African countries have made approvals on open field cultivation of genetically modified (GM) crops, Kenya is the first to use its own domesticated biosafety law to grant a decision on such an application.

You can download the Authority's approval notice on:
http://www.biosafetykenya.go.ke/images/Public_Notice.pdf

FACT 3

Kenya was one of the eight African countries that conducted field trials on biotech crops



1. Kenya is steadily gearing towards commercialization of GM crops. As of 2015, the country had undertaken confined field trials (CFTs) on various crops including insect resistant cotton, drought tolerant maize, insect resistant maize, virus resistant cassava, virus resistant sweet potato and biofortified sorghum.
2. Most of the trials are on important food security crops and they focus on traits of high relevance to challenges facing the country. The trials are conducted collaboratively with Kenya's national research organization, KALRO.
3. Plans to conduct National Performance Trials (NPTs) on Bt maize are underway. NPTs enable researchers to assess the performance of genetically enhanced varieties against existing varieties.

Status of Confined Field Trials in Kenya in 2015

Crop	Trait	Institutions Involved	Confined Field Trial Stage as of October 2015
Maize	Drought Tolerance (WEMA)	KALRO, AATF, CIMMYT	CFT – 6th season completed
	WEMA Insect Resistance	KARLO, AATF, CIMMYT	Review for environmental release/ Open field cultivation
	Stack trait maize event for insect resistance and drought tolerance	KARLO, AATF, CIMMYT	1st CFT approval granted
Cotton	Insect Resistance	KALRO, Monsanto	Review for environmental release/ Open field cultivation
Cassava	Cassava Mosaic Disease (CMD)	KALRO, DDPSC, IITA	CFT – 2nd season completed
	Cassava Brown Streak Disease (CBSD) Introgression into CMD tolerant background materials	KALRO, DDPSC, IITA	1st CFT completed
	Cassava Brown Streak Virus (CBSV) and African Cassava Mosaic Virus (ACMV)	MMUST	CFT - 1st season ongoing
Sweet Potato	siRNA resistance to Sweet potato virus disease	KALRO, DDPSC	1st CFT ongoing
Sorghum	Enhanced pro-Vitamin A Levels, Bioavailable Zinc and Iron	KALRO, Africa Harvest, Pioneer Hi-Bred, a DuPont business	CFT - 7th season ongoing

Acronyms

- AATF - African Agricultural Technology Foundation
- DDPSC - Donald Danforth Plant Science Center
- CIMMYT - International Maize and Wheat Improvement Center
- IITA - International Institute of Tropical Agriculture
- KALRO - Kenya Agricultural and Livestock Research Organization
- MMUST - Masinde Muliro University of Science and Technology
- WEMA - Water Efficient Maize for Africa

FACT 4

National Biosafety Authority Board of Management and Biosafety Appeals Board were constituted



1. A new National Biosafety Authority Board of Management was re-constituted in 2015. This is the second board to manage the Authority since its establishment in 2010.
2. The Biosafety Appeals Board, established under section 35 of the Biosafety Act, No2/2009, was appointed in 2014. It became fully functional in 2015. This Board was set up to hear appeals arising from decisions of the NBA.
3. In 2015, the two boards met together for the first time and had an opportunity to enhance their capacity on biosafety communications.

DAILY NATION NEWS BUSINESS COUNTIES SPORTS BLOGS & OPINION

Cotton farmers ask President to lift ban on GM crops

Cotton farmers from eight counties have petitioned President Kenyatta to lift the ban on genetically modified crops.

TUESDAY FEBRUARY 10 2015



A farmer tending her cotton crop. Expected soon after will be the release of Bt maize and Bt cotton, following application to the National Biosafety Authority by the Kenya Agricultural and Livestock Research Organisation and the African Agricultural Technology Foundation. FILE PHOTO | NATION MEDIA GROUP

1. In 2015, high level policy makers, including the Deputy President, H.E. William Ruto, openly acknowledged the role of modern biotechnology in addressing Kenya's agricultural production challenges. While presiding over the 4th Annual NBA conference he announced government's plans to lift a 2012 ban on importation of GM foods.
2. Several Members of Parliament, Governors and Senators declared their support for ongoing biotech research. During an in-country biotech study tour, a number of parliamentarians were convinced beyond doubt that the country has sufficient capacity to handle and regulate GM crops.
3. 2015 witnessed intensified grassroots calls for lifting of the GM foods import ban. In February, cotton farmers petitioned the President to create an environment that would enable them cultivate GM cotton for competitiveness and well-being.



REPUBLIC OF KENYA

IN THE HIGH COURT OF KENYA

CONSTITUTIONAL & HUMAN RIGHTS DIVISION

PETITION NO. 399 OF 2015

KENYA SMALL SCALE FARMERS FORUM.....PETITIONER

VERSUS

CABINET SECRETARY MINISTRY OF EDUCATION

SCIENCE AND TECHNOLOGY1ST RESPONDENT

ATTORNEY GENERAL.....2ND RESPONDENT

CABINET SECRETARY, MINISTRY OF AGRICULTURE ...1ST INTERESTED PARTY

CABINET SECRETARY MINISTRY OF HEALTH.....2ND INTERESTED PARTY

COUNCIL OF GOVERNORS.....3RD INTERESTED PARTY

NATIONAL BIOSAFETY AUTHORITY.....4TH INTERESTED PARTY

1. Following remarks by Kenya's Deputy President that the GM foods imports ban would be lifted, Kenya Small Scale Farmers Forum moved to court to stop government from lifting the ban.
2. In October 2015, the high court declined to issue a temporary injunction barring government from lifting the ban. The presiding judge was not satisfied that the circumstances were exceptional enough to demand court intervention.
3. The judge ruled that the petitioners did not prove even on a balance of probabilities that GMOs are unsafe for human consumption. He stated that the law and regulations in place were sufficient to address their concerns.

You can download the petition and ruling on:
<http://kenyalaw.org/caselaw/cases/view/114794/>

FACT 7

Kenya has the greatest concentration of organizations working on biotech research in eastern Africa



1. Majority of the country's agri-biotech research is carried out by KALRO. This is done either individually or in collaboration with national, regional and international partners.
2. National universities have established strong research programs on modern biotechnology. They include, among others:
 - Egerton University
 - Jomo Kenyatta University of Agriculture and Technology
 - Kenyatta University
 - Masinde Muliro University of Science and Technology and;
 - University of Nairobi
3. The country hosts various international research organizations under the CGIAR group and is home to the Biosciences eastern and central Africa (BecA) regional hub, a world-class research facility nestled at the International Livestock Research Institute (ILRI).

FACT 8

Partnerships in awareness creation and public participation in agri-biotech continued



HOME NEWS ENTERTAINMENT SPORTS LIFESTYLE

Busia Governor tells gov't to commercialise genetically modified cotton

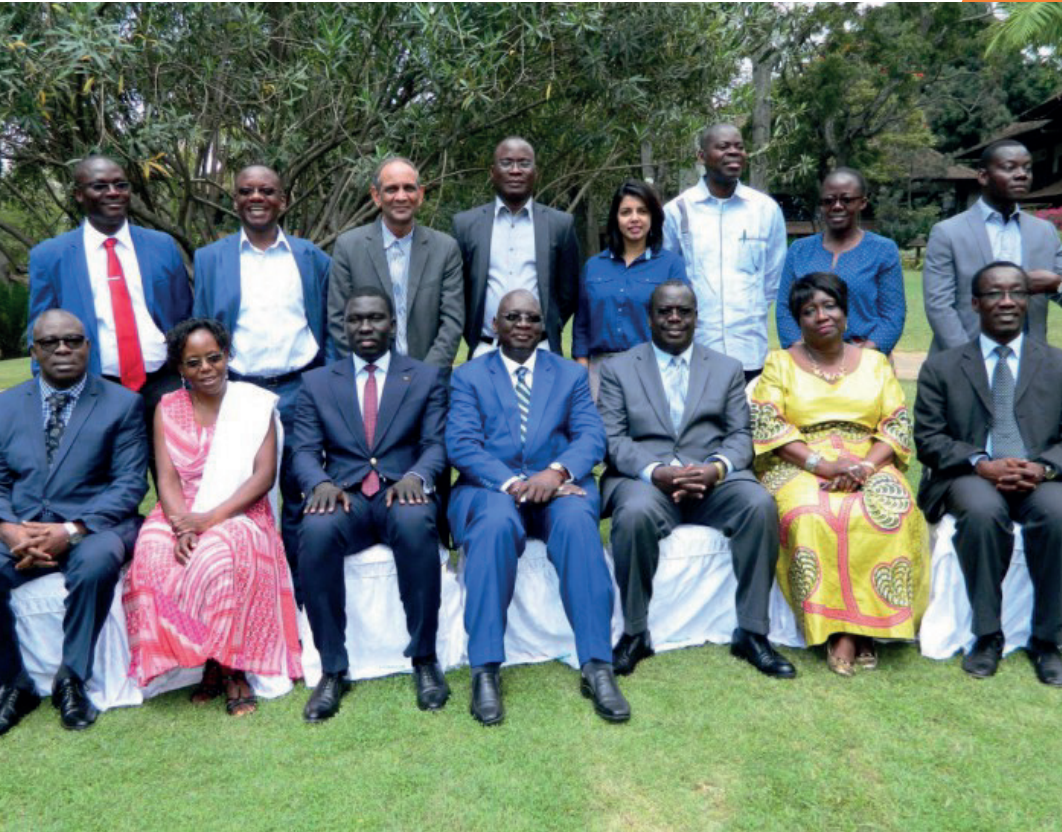
By Reuben Wanyama, Citizen Digital
Published on 4 December 2015



1. The government-led initiative, National Biotechnology Awareness Strategy (BioAWARE), partnered with Kenya Biotechnology and Biosafety Consortium (KBBC) members to sustain awareness and build public trust on agri-biotech and biosafety.
2. The National Biosafety Authority played an active role in promoting public awareness and education on biosafety matters. The Authority held its annual biosafety conference that brought together a broad range of stakeholders to discuss topical biosafety issues. It also held two public hearings on GMOs in 2015.
3. Non-governmental organizations continued to play a key role in awareness creation. ISAAA pioneered outreach activities in the early nineties. Over the last decade, together with AATF through the Open Forum on Agricultural Biotechnology (OFAB), *AfriCenter* continued to be at the forefront in raising awareness on all agri-biotech issues. Other organizations involved in awareness creation initiatives include the African Biotechnology Stakeholders Forum, Africa Harvest, Kenya University Biotechnology Consortium, as well as the private sector, mass media and several civil society groups.

FACT 9

Kenya's NBA CEO appointed Chairman of the New Association of National Biosafety Agencies in Africa



1. The Association of National Biosafety Agencies in Africa (ANBAA) was launched in Nairobi, Kenya.
2. ANBAA seeks to harmonize biosafety systems in the continent and facilitate free exchange of information on GMOs. It also aims to work towards enhancing common positions at international meetings such as COP-MOP, and work towards ownership and sustainability of regulatory service provision in Africa.
3. As of 2015, the Association's membership was drawn from nineteen (19) African countries.

FACT 10

The Government needs to fast-track implementation of current policies to safeguard Kenya's scientific leadership in the region

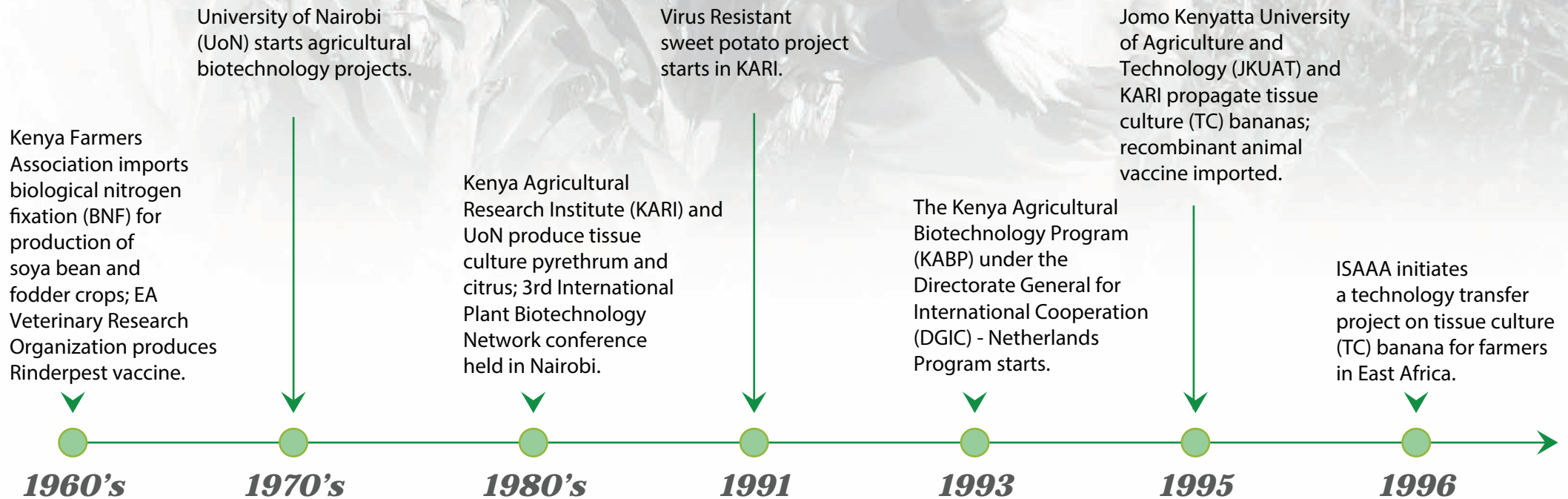


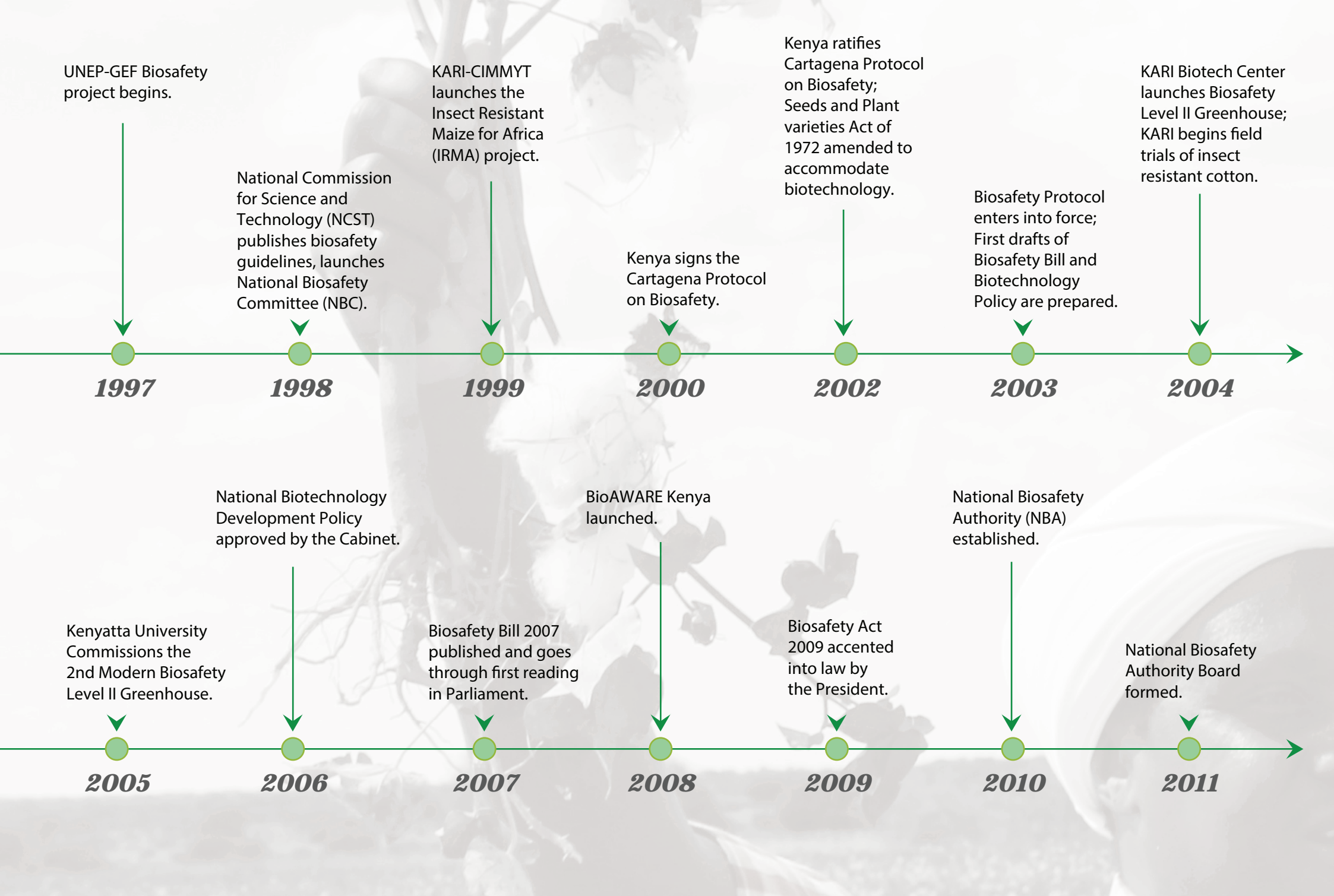
KENYA VISION 2030

THE POPULAR VERSION

1. While the Government has put in place all the necessary legal and institutional frameworks for the safe and responsible use of modern biotechnology, progress is hampered by a slow implementation process.
2. A ban on importation of GM foods in 2012 contradicts the clear-laid out mechanism of ascertaining safety of GM foods. This should be addressed urgently to facilitate transitioning of current research work into products for farmers and address the serious challenges affecting agricultural productivity and environmental degradation.
3. The GM foods import ban continues to send wrong signals about the country's commitment to technological advancements in agriculture as stipulated in key policy documents such as Vision 2030 - Second Medium Term Plan.

Milestones in Agricultural Biotechnology Development in Kenya





UNEP-GEF Biosafety project begins.

National Commission for Science and Technology (NCST) publishes biosafety guidelines, launches National Biosafety Committee (NBC).

KARI-CIMMYT launches the Insect Resistant Maize for Africa (IRMA) project.

Kenya signs the Cartagena Protocol on Biosafety.

Kenya ratifies Cartagena Protocol on Biosafety; Seeds and Plant varieties Act of 1972 amended to accommodate biotechnology.

Biosafety Protocol enters into force; First drafts of Biosafety Bill and Biotechnology Policy are prepared.

KARI Biotech Center launches Biosafety Level II Greenhouse; KARI begins field trials of insect resistant cotton.

1997

1998

1999

2000

2002

2003

2004

National Biotechnology Development Policy approved by the Cabinet.

BioAWARE Kenya launched.

National Biosafety Authority (NBA) established.

Kenyatta University Commissions the 2nd Modern Biosafety Level II Greenhouse.

Biosafety Bill 2007 published and goes through first reading in Parliament.

Biosafety Act 2009 accented into law by the President.

National Biosafety Authority Board formed.

2005

2006

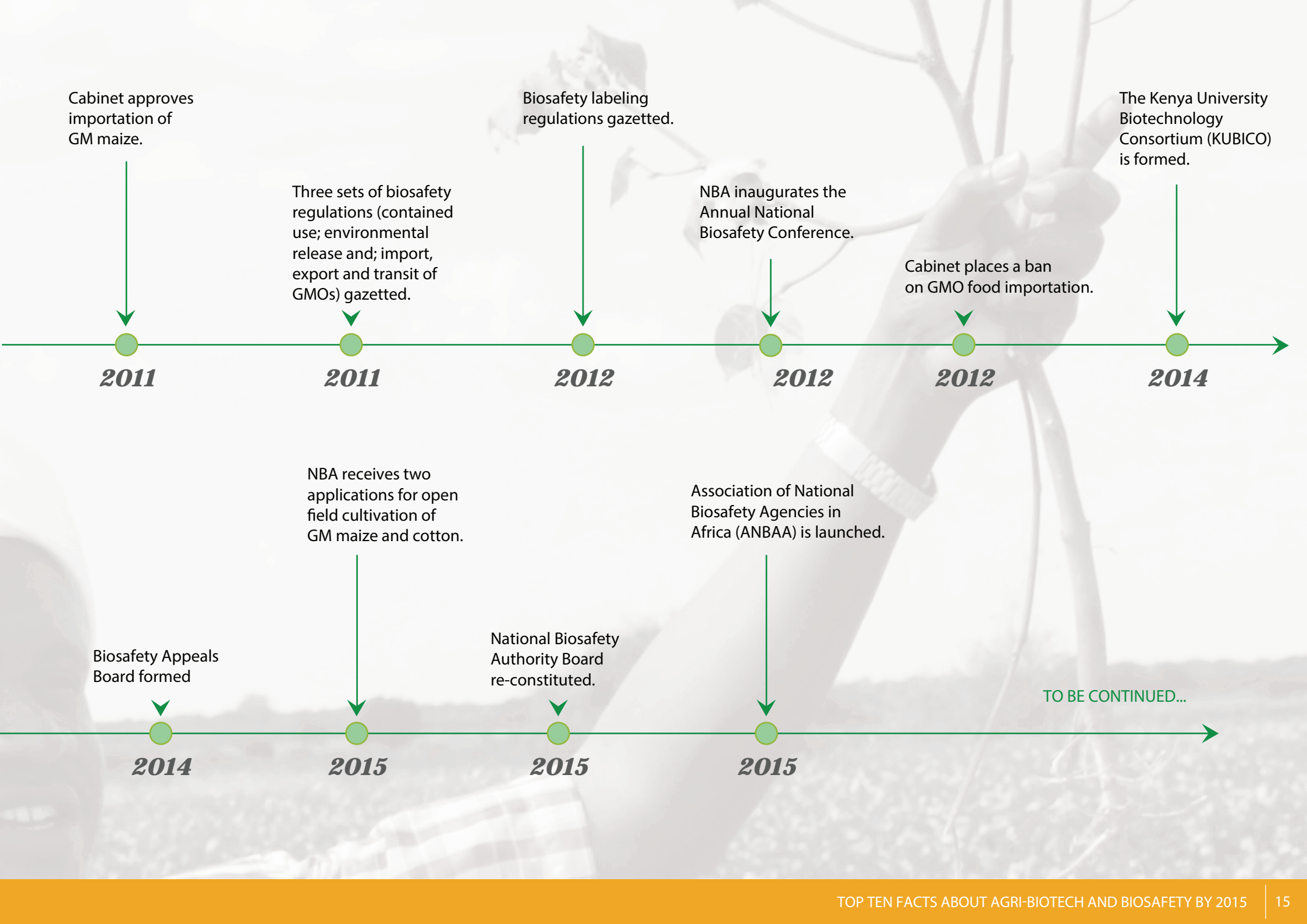
2007

2008

2009

2010

2011



Cabinet approves importation of GM maize.

Three sets of biosafety regulations (contained use; environmental release and; import, export and transit of GMOs) gazetted.

Biosafety labeling regulations gazetted.

NBA inaugurates the Annual National Biosafety Conference.

Cabinet places a ban on GMO food importation.

The Kenya University Biotechnology Consortium (KUBICO) is formed.

2011

2011

2012

2012

2012

2014

Biosafety Appeals Board formed

NBA receives two applications for open field cultivation of GM maize and cotton.

National Biosafety Authority Board re-constituted.

Association of National Biosafety Agencies in Africa (ANBAA) is launched.

TO BE CONTINUED...

2014

2015

2015

2015



“The future is going to be knowledge-based and technology driven. We cannot, as the people of Kenya, be left behind when the world is discussing matters biotechnology.”

- H.E. William Ruto during the 4th Annual Biosafety Conference, August 2015.

ISAAA AfriCenter
ILRI Campus, Old Naivasha Road,
P.O.Box 70-00605,
Uthiru, Nairobi, Kenya.
Tel: +254 20 4223618,
Email: africenter@isaaa.org
Website: www.africenter.isaaa.org
 Twitter: @afri_isaaa
 Facebook: Isaaa AfriCenter



AATF
ILRI Campus, Old Naivasha Road,
P.O.Box 30709-00100,
Nairobi, Kenya.
Tel: +254 20 422 3700,
Email: ofab@aatf-africa.org
Website: www.aatf-africa.org
 Twitter: @aatfafrica