



# TOP 10 FACTS

## ABOUT BIOSAFETY AND BIOTECHNOLOGY in Uganda by 2016



# FACT 1

## Establishment of a National Biosafety system is part of Uganda's international obligations to regulate Genetically Modified Organisms (GMOs)

- 1.** Uganda is among 170 parties that signed and/or ratified the internationally binding Cartagena Protocol on Biosafety to the Convention on Biological Diversity.
- 2.** Uganda's Minister of State for Environment then, signed the Protocol and ratified it on 30th Nov 2001, an indication that the country is committed to ensuring the safety and prosperity of Ugandans through safe development and deployment of products resulting from modern biotechnology.
- 3.** The National Focal Point (NFP) for the Cartagena Protocol on Biosafety is the Ministry responsible for Environment. The role of the NFP is to update international stakeholders on the biosafety progress in Uganda through the Biosafety Clearing House.



The Late Hon. Lawrence Kezimbira-Muyingo center)- Uganda's State Minister for Environment (1999-2001) signed the Cartagena Protocol on Biosafety on behalf of Uganda.

## FACT 2

# The National Biosafety Committee (NBC) has been functional since 1996

- 1.** The National Biosafety Committee (NBC) was established in 1996 using the Uganda National Council for Science and Technology (UNCST) Act, Cap 209. UNCST is the designated competent authority for biotechnology and biosafety in Uganda.
- 2.** The mandate of the NBC at establishment was to regulate modern biotechnology research and application in Uganda. It is composed of representatives from all relevant sectors e.g. consumer services, trade, environment, human health specialists.
- 3.** Since its establishment, the NBC has been appointed 5 times. The NBC has reviewed over 20 biosafety application in fields of agriculture and human health.

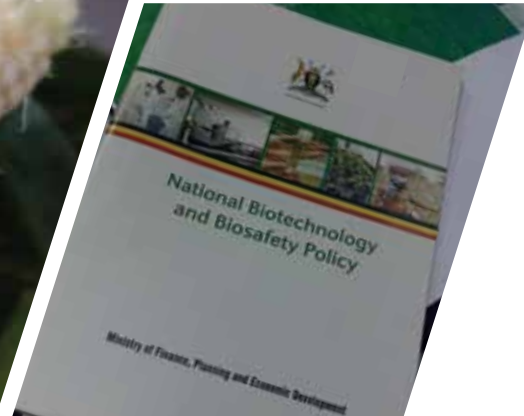
Dr. Thomas Egwang- Director General, Med Biotech Laboratories, was first Chair of the National Biosafety Committee



# FACT 3

## Uganda has a National Biotechnology and Biosafety Policy

- 1.** The Government of Uganda approved the National Biotechnology and Biosafety Policy in April 2008.
- 2.** The Policy is implemented by the Uganda National Council for Science and Technology (UNCST), which is the current competent authority for biosafety in the country.
- 3.** The Policy aims to build and strengthen national capacity in biotechnology through research, development, application, and regulation for safe and sustainable use of modern biotechnology in Uganda.



## The Government of Uganda is committed to the strategic utilization of modern biotechnology for national development

1. In the last 20 years, the Government has committed more than UGX 20 billion (USD 6M) towards infrastructure and human capacity development, for agricultural biotechnology research.
2. In 2003, the President of Uganda, H.E. Yoweri K. Museveni opened the first National Biotechnology Center at Kawanda Agricultural Research Institute.
3. The Government has also substantially invested in modern biotechnology research in the fields of human health, industry and environmental management.



President of Uganda, H.E. Y. K. Museveni, after officially opening the Biotechnology Laboratory at Kawanda Agricultural Research Institute in August 2003.



# FACT 5

## Human and infrastructural capacity is increasing

1. At least 17 public institutions are conducting modern biotechnology research for agricultural development, industrial use and human health interventions.
2. At least 10 public and private academic institutions are building capacity for conducting modern biotechnology-based research in Uganda.
3. At least 250 scientists in Uganda are actively involved in modern biotechnology research in agriculture, environment, industry, and human health sectors.



## FACT 6

# Uganda is one of the African countries conducting confined field trials (CFTs) for GM crops

1. The first CFT was planted in November 2007 to test banana for resistance to one of the major devastating diseases called Black Sigatoka.
2. Uganda has since conducted at least 18 separate CFTs for GM crops (some GM crops have been under confined field testing for more than 7 years).
3. Uganda has the most number of crops under CFTs in the region including cassava, potatoes, rice, maize, and banana.

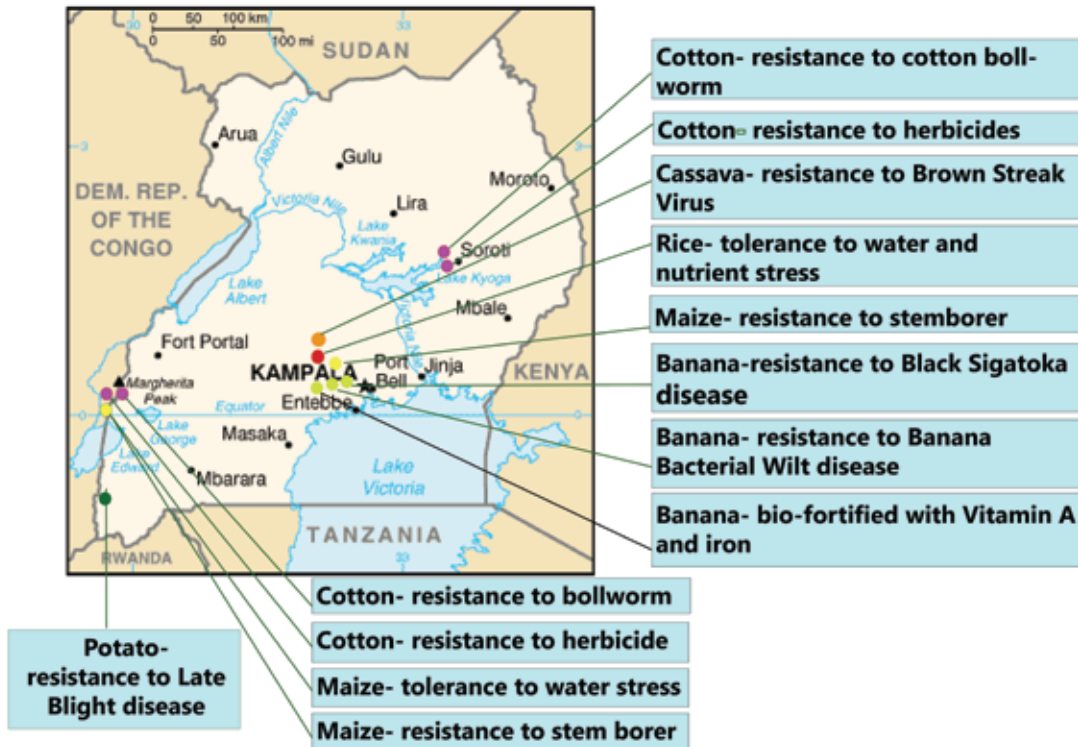


## GM crops' confined field testing in Uganda by 2016

<b>Crop</b>	<b>Characteristics / Traits tested</b>	<b>Year testing commenced</b>
Banana	Resistance to Black Sigatoka disease	2006
Cotton	Resistance to insect (Bollworm) and Resistance to herbicide (Round up)	2008
Banana	Nutritional enhancement (provitamin A and Iron)	2009
Cassava	Resistance to Cassava Brown Streak Disease	2010
Maize	Tolerance to drought	2010
Banana	Resistance to Banana Bacterial (Xanthomonas) Wilt Disease	2010
Cassava	Resistance to East African Cassava Mosaic Virus and African Cassava Mosaic Virus	2011
Cassava	Resistance to Cassava Brown Streak Disease (multisite trials under confinement)	2012
Banana	Resistance to Nematodes	2012
Maize	Resistance to insect (Maize stem borer)	2012
Rice	Tolerance to low soil nitrogen and tolerance to drought	2012
Sweet Potato	Resistance to Sweet potato virus disease	2013
Potato	Resistance to Potato Blight Disease	2015



## GM crops' confined field testing in Uganda 's environment by 2016



# FACT 7

Biotechnology research in Uganda is also being done for environmental management, human and animal health

1. GM pharmaceutical products such as insulin are already being used and there is ongoing testing of HIV and Ebola vaccines which are also products of modern biotech.
2. There is ongoing research to use GMOs or their ingredients in the industrial sector.
3. There is also ongoing research to use GMO micro-organisms for environmental management.



## FACT 8

# The Government of Uganda is supporting public awareness and dialogue on modern biotechnology

- 1.** The level of awareness and understanding of modern biotechnology among the majority of Ugandans is still low with a lot of misinformation.
- 2.** The National Biotechnology and Biosafety Policy and the proposed Biosafety law provide for public participation and engagement during decision-making on application of modern biotechnology.
- 3.** A number of public-sector agencies involved in biotechnology research, development, application, and regulation have made efforts to engage the public to enhance awareness on biotechnology and biosafety in Uganda.



# FACT 9

## Uganda has made progress towards establishing the relevant legislation for biotechnology and biosafety

1. The National Biotechnology and Biosafety Bill was drafted by The Ministry of Justice in August 2011. The Bill was then approved by Cabinet in October 2012.
2. The Minister of Finance, Planning, and Economic Development tabled the Bill to Parliament in February 2013 and then the Bill was referred to the Parliamentary Committee for Science and Technology.
3. The Bill is now a responsibility of the newly established Ministry of Science, Technology, and Innovation.

**Bill No. 18 National Biotechnology And Biosafety Bill 2012**  
**THE NATIONAL BIOTECHNOLOGY AND BIOSAFETY BILL, 2012**

### ARRANGEMENT OF CLAUSES

#### Clause

#### PART I—PRELIMINARY

1. Application.
2. Objectives of the Act.
3. Interpretation.

#### PART II—INSTITUTIONAL FRAMEWORK

##### *National Focal Point*

4. Designation of National Focal Point.
5. Functions of the National Focal Point.

##### *Competent Authority*

6. Designation of Competent Authority.
7. Functions of the Competent Authority.



Hon. Elioda Tumwesigye  
Minister of Science, Technology  
and Innovation

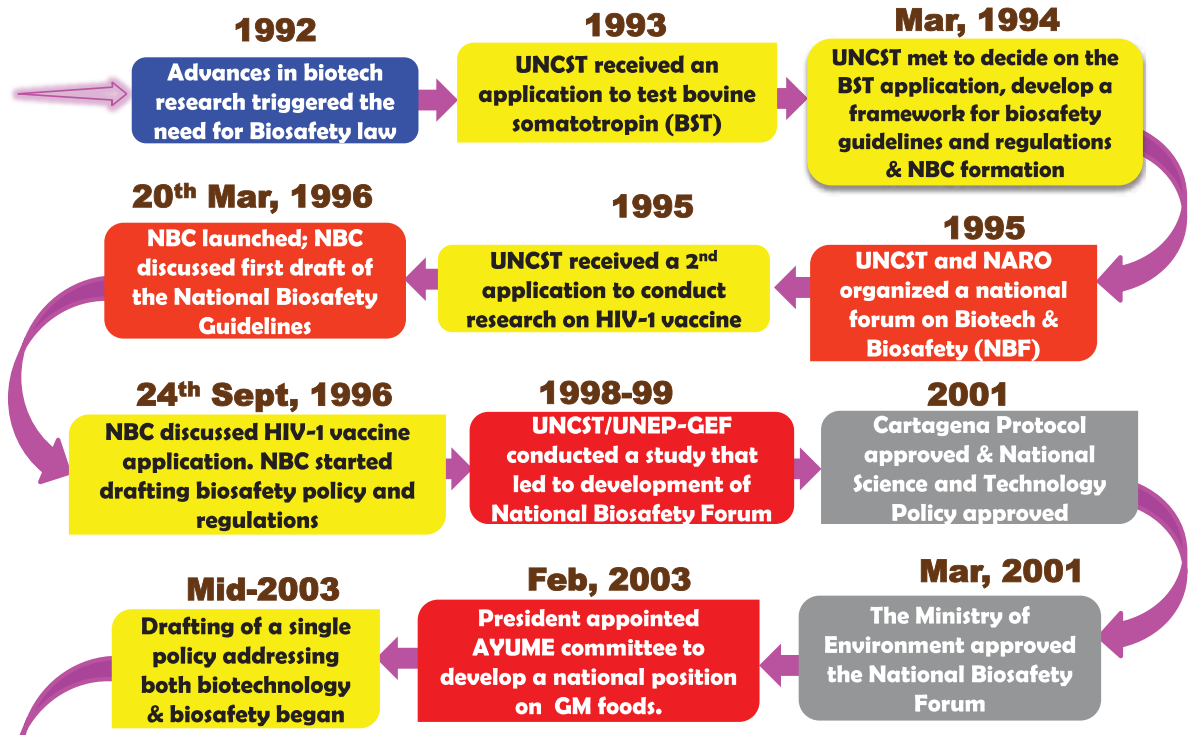
## FACT 10

# Uganda needs Biosafety regulation to ensure safe use of biotechnology and its products

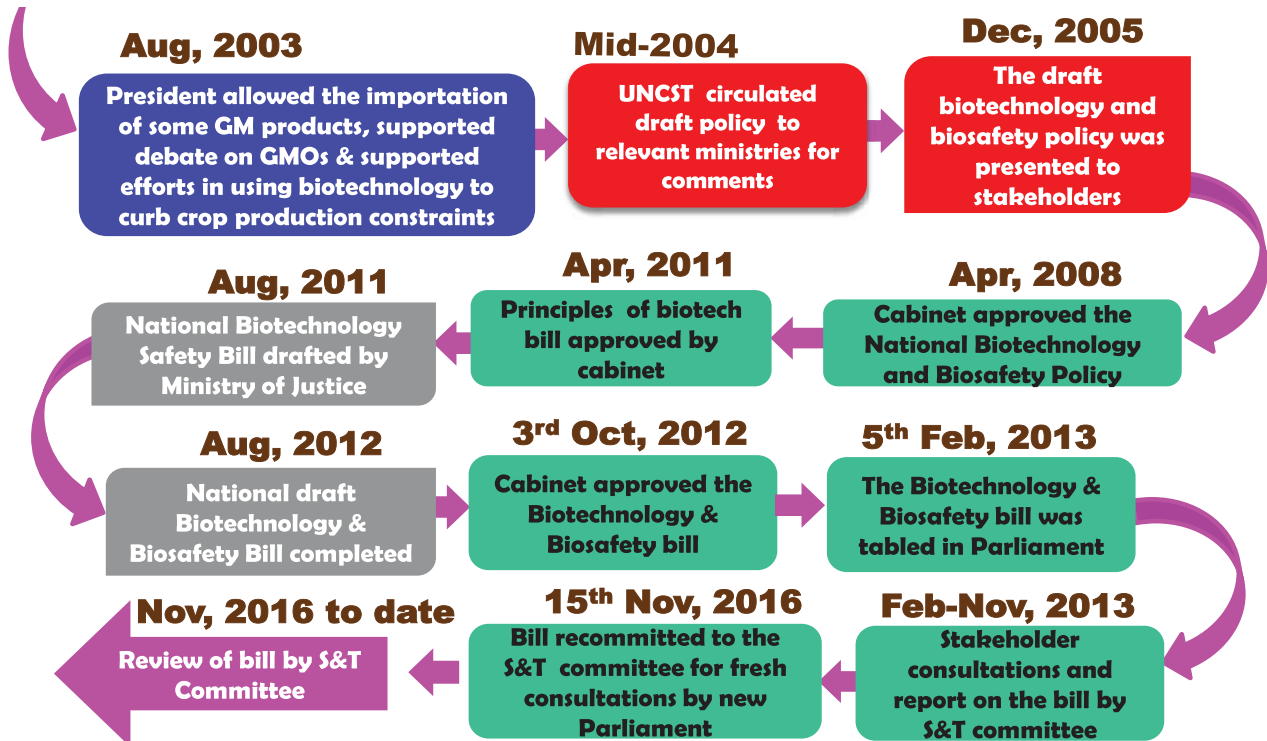
- 1.** The proposed law provides for regulation of all modern biotechnology activities including: lab and field research, import, export, transit and general use.
- 2.** Elaborate risk and safety assessment procedures are required by the proposed law.
- 3.** The proposed law mandates relevant regulatory agencies to build relevant capacity and engage the public during decision making for general use.



# Key Chronological Milestones in the Biotechnology Regulation Process in Uganda







**KEY:**

- = Key goals attained
- = Multi-sectoral involvement & consultations
- = Decisions and involvement of the UNCST
- = Independent but important activities
- = important involvement outside the UNCST



*"The Biotechnology Bill will help us resolve some of the problems we have in the agriculture sector. The NRM caucus will soon convene to finalise on this matter. We should not be held back on this matter."*

**H. E. Yoweri K. Museveni**  
President of the Republic of Uganda  
Kawumu State Lodge , Luwero District. 20/03/2017

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