For purposes of surveillance on unapproved GMOs, the Authority has posted Biosafety Inspectors at border offices in Mombasa, Busia, Namanga and JKIA who do assessment of all incoming consignments and also conduct random surveillance in supermarkets, shops and open markets.

### Q11. Is NBA Pro or against GMOs?

NBA's mandate is to regulate all GMO activities in Kenya. The Authority is therefore not pro or against GMOs but a referee that ensures research ethics and safety of GMOs.

# Q12. Has the ban affected GMO research in Kenya?

No. The ban does not affect locally grown GMOs and research on the same. There have been great strides made since 2012 when the ban was imposed by the cabinet. Since the Authority has approved 9 confined field trials and 20 research projects in the laboratories and greenhouses.

#### Q13. When can farmers access GMO seeds?

Currently, GM cotton and maize have been approved for national performance trials. This means that if the crops satisfy the requirements during evaluation, they will be commercialized as soon as possible. Developers and researchers have set 2019 as the year of commercialization and that is when seeds will be available.

## For more information, please contact:

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# FREQUENTLY ASKED QUESTIONS ON GMOs (FAQs)

# Q1. What is the role of the National Biosafety Authority in Kenya?

The National Biosafety Authority (NBA) was established pursuant to the provisions of the Biosafety Act No. 2 of 2009. The mandate of the Authority is to exercise supervision and control over the development, transfer, handling and use of genetically modified organisms (GMOs) so as to ensure and assure safety of human and animal health and provide adequate protection of the environment.

NBA is the competent authority of the Republic of Kenya and is the Focal Point for the Cartagena Protocol on Biosafety. The Authority regulates all activities involving GMO in food, feed, research, industry, trade and environmental release.

#### Q2. What are GMOs?

A Genetically modified organism (GMO) is a plant, animal or microorganism that has been genetically changed to improve it in some way e.g. maize that can protect itself from insect attack or drought.

### Q3. Are GMOs safe?

GMOs approved by NBA are as safe as their conventional crops or products. Safety assessment based on international standards forms the basis of evaluating the safety of GM foods. The GM foods currently available on the international market have undergone thorough safety assessment and have shown no adverse effects on human and animal health.

# Q4. Can GMO cross-pollinate with conventional crops?

Yes. Pollens from GM crop may flow to the conventional crop and viceversa. This is, however, crop specific. For most crops, crosspollination occurs if the distance is less than 400 metres. However, if the pollens cross over to the conventional crop, there is no harm so long the GM crop has been approved by NBA.

# Q5. What are some of the potential benefits of carrying out genetic modification?

- Increased resistance of plants to insects, diseases and other constraints.
- Reduced use of chemical insecticides.
- Improved nutritional qualities such as vitamin A (in rice, sorghum and sweet potatoes).
- Increased crop yields.
- Development of vaccines and diagnostic kits for improved animal health.
- Environmental protection through use of less chemical insecticides.

# Q6. What are the approved GM crops in the international market?

The number of countries adopting GM crops has tremendously increased from 6 in 1996 to 28 as at 2016. Some of the countries producing and consuming GMOs include:

- Africa: South Africa- Maize, soybean and cotton; Sudan- cotton.
- USA: maize, cotton, soybean, canola, sugar beet, alfalfa, papaya and sauash.
- Brazil and Argentina: soybean, cotton and maize.
- India: cotton
- Philippines, Spain, Portugal: maize
- China: cotton, poplar, papaya, tomato and sweet pepper
- Australia: cotton and canola
- Canada: canola, maize, soybean and sugar beet
- Many other Latin American and Asian countries

(Source: Clive James, 2016)

# Q7. What are the leading GM crops and traits available in the market globally?

- Maize-Insect and drought resistance
- Cotton-Insect resistance
- Soyabean-Herbicide tolerance
- Canola-Insect resistance

# Q8. What is the status of GM crops in Kenya?

In Kenya, no GM crops have been commercialized yet. Bt cotton and Bt maize have been approved for National Performance Trials (NPTs).

The following are approved ongoing projects at research level.

- Insect resistant and drought tolerant maize; WEMA Project (KALRO, Kiboko and Kitale)
- Virus-resistant cassava (KALRO Mtwapa, Alupe and Thika)
- Disease resistant bananas (KALRO Alupe)
- Virus resistant sweet potatoes (KALRO Kakamega)
- Modified colour Gypsophila cut flowers (Naivasha)
- Improved vaccines against various livestock diseases (ILRI)

### Q9. When are we going to commercialise GM crops in Kenya?

There is no set timeline for commercialization of GMOs in Kenya. The role of NBA is to assess the safety of GMO crops and animals before they enter into the market. As stated in Question 10 above, two crops i.e. Bt maize and Bt cotton are at an advanced stage of testing and may be commercialized soon.

## Q10. How is NBA ensuring safety of Kenyans on GM crops?

NBA undertakes food safety assessment of all GM crops in Kenya and those transported through Kenya. Before any GM food is placed on the market, thorough scrutiny is done to ensure its safety for human and animal consumption and to the environment.