

GENETICALLY MODIFIED ORGANISM PRESENTATION

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by
Department of Trade and Industry



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Introduction

- A genetically modified organism (GMO) means any organism; the genes (or genetic material) of which have been modified in a way that does not occur naturally through mating or natural recombination or both.
- A gene is a biological unit that determines an organism's inherited characteristics.
- An example of a GMO is a plant that has been modified to contain a gene from a common soil bacterium *Bacillus thuringiensis*, giving it a built-in resistance to the maize stalk borer, an insect that attacks and destroys maize crops.



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What are the benefits of genetic modification?

- Plants can be modified to increase their resistance to insects, diseases and other pests that are capable of destroying or seriously damaging crops.
- This not only results in an increase in the yield of these crops, but also reduces the need for using pesticides.
- Reduced pesticide use implies decreased pollution and increased safety for farm-workers and those living nearby, as well as less harm to animal life.
- Food quality is improved because there is less fungal infection, insect damage and residual pesticide.



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What are the benefits of genetic modification?

- Less time and energy is spent in crop production.
- Plants can also be modified to have stress-tolerance qualities, improved taste and appearances and better processing characteristics.
- Improvements can be made to nutritional qualities such as vitamin A, which can play an important role in combating deficiency diseases in millions of people.
- Eliminating nutritional deficiency helps to promote a healthy population and productivity.



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BACKGROUND OF GMO'S IN SOUTH AFRICA

- The South African government along with much of our agriculture industry has been as enthusiastic about genetic engineering as their US counterparts.
- This remains the only country in the world that allows GM varieties of its national staple food white maize – to be grown commercially.
- In the 2011/2012 season approximately 72% of all maize seed sold in South Africa was GM.



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BACKGROUND OF GMO'S IN SOUTH AFRICA

- Currently, genetically modified maize, soya-bean and cotton have been approved for general use in South Africa
- All activities related to GMOs are regulated by **the Genetically Modified Organisms Act, 1997 (Act No. 15 of 1997)**.
- The GMO Act is administered by the Department of Agriculture, Forestry and Fisheries and makes provision for a Registrar, two regulatory bodies, i.e. the Advisory Committee and Executive Council, as well as inspectors.



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How are GMOs regulated in South Africa?

- Genetically modified organisms (GMOs) or Living Modified Organisms (LMOs) have been permitted in SA since 1992.
- In the absence of specific legislation to regulate activities with GMOs, a Committee was established to advise government, industry and the public on the safety of GMOs.
- This Committee was known as the South African Committee for Genetic Experimentation.



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The Genetically Modified Organisms Act, 1997 (Act No, 15 of 1997)

- Was passed by Parliament with the following objectives:
 - To provide for measures to promote the responsible development, production, use and application of GMOs.
 - To ensure that all activities involving the use of GMOs (including importation, exportation, transit development, contained use, storage, application, production, release and distribution) are carried out in such a way as to limit possible harmful consequences to the environment and human as well as animal health.
 - To give attention to the prevention of accidents and the effective management of waste.



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The Genetically Modified Organisms Act, 1997 (Act No, 15 of 1997)

- To establish common measures for the evaluation and reduction of the potential risks arising from activities involving the use of GMOs.
- To lay down the necessary requirements and criteria for risk assessment.
- To establish a Council for GMOs.
- To ensure that GMOs are appropriate and do not present a hazard to the environment.
- To establish appropriate procedures for the notification of specific activities involving the use of GMOs and to provide for matters connected therewith.



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BIOSAFETY AS THE POLICY

- Biosafety is a term used to describe efforts to reduce and eliminate the potential risks resulting from biotechnology and its products.
- The Biosafety Policy aims to provide mechanisms to ensure the safe use of biotechnology, and in particular, activities with GMOs, to strengthen the economy and enhance livelihood without prejudice to public health or the environment.



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What must South Africa government do for GMO'S?

- South Africa is required to take measures ensuring that LMOs subject to intentional trans boundary movement are accompanied by documentation identifying the LMOs and providing contact details of persons responsible for such movement. The details of these requirements vary according to the intended use of the LMOs but require that certain basic requirements be fulfilled.

These are:

- A letter indicating the intent of the potential importer/exporter
- Completed application forms
- Payment of appropriate fees in terms of the GMO Act
- Notification of the country of import into whose environment the LMO will be introduced intentionally



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CONSUMER PROTECTION ACT, 2008 (Act No. 68 of 2008)

- **This Act looks at the** : Product labelling and trade descriptions: Genetically Modified Organisms (GMO's)
- **In this regulation** the definition is the same as it is defined on the Genetically Modified Organisms Act, 1997 (Act No, 15 of 1997)
- For purposes of section 24(6) of the Act and Regulation 7, all imported and locally produced goods that contains 5% or more GM components or ingredients have to be labeled as "contains genetically modified ingredients or components", giving South Africans the option to choose if they want to support this technology or not



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CONSUMER PROTECTION ACT, 2008 (Act No. 68 of 2008)

For purposes of **Section 24(6)** , the Minister promulgated **regulation 7** which applies to **all goods approved for commercialisation** by the Executive Council for Genetically Modified Organisms established by section 3 of the

Genetically Modified Organisms Act, 15 of 1997. Currently, the approved products are **Maize , Cotton, Imported Canola Oil, and Soya**



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CONSUMER PROTECTION ACT, 2008 (Act No. 68 of 2008)

Thresholds in G M O labelling

- ❖ Only where goods, components or ingredients contain **less than 1 %** GMO material can a producer or importer claim that such a good, component or ingredient **does not contain GMO**.
- ❖ If the good, component or ingredient contains less than 5% it may be so labelled.
- ❖ If the good (good, component or ingredient) contains **above 5%** it **MUST** be **labelled** as containing GMO.



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THE ROLE OF the dti

- After receiving advice from the DAFF and the Department of Health **the dti** published draft amendments to the regulations that govern the labeling of GM food in South Africa.
- **the dti** has received numerous comments on what the final regulations should state and is consolidating and considering such input.
- **the dti** will recommend the final regulations to the Minister before the end of September 2013 for issuing.



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End

Thank you



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