

Possible benefits of GMO

1. **Better resistance to pest:** Genetically modified crops such as B.t cotton can be more pest resistance thereby increasing production and reducing the use of chemical pesticides.
2. **Herbicide tolerance:** A crop is made resistant to a particular herbicide. This is done by giving the crop a new gene or switching off an existing gene.
3. **Medicines and vaccines:** GMOs can be used for producing drugs, vaccines and pharmaceutical products for curing human and animal diseases.

Possible risks of GMO

1. **Unintended harm to other organisms:** It is argued that GMO crops such as B.t cotton would not only kill crop-damaging pests but would also kill many other harmless insects.
2. **Allergic:** on account of the new substance to which we have never been exposed and which may occur in genetically modified food, there exists the possibility of allergic reaction.

What is Genetically Modified Food

Genetically modified foods are foods that are derived from GMOs. GM foods have been consumed around the world for about 20 years. In many parts of the world, soybean, rice, maize, and cotton are the typical crops subjected to gene modification through modern biotechnology. However, it is difficult to say if the product is genetically modified or not without subjecting to laboratory test.

3. **Unknown effects on human health:** Their is a growing concern that introducing foreign genes into food plants may have an unexpected and negative impact on human health.

Typical crops and its product subjected to gene modification



Are GM foods safe for human consumption?

So far, there has been no scientific evidence of danger but also there is no certainty regarding the risk free of consuming GMOs.

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National Biosafety Framework Project
Bhutan Agriculture and Food Regulatory Authority
(BAFRA)
Ministry of Agriculture and Forests



Project Background

Bhutan ratified the Cartagena Protocol on Biosafety in August 2002 and as an obligation to the protocol, Bhutan developed the National Biosafety Framework (NBF) in 2006.

With the help of funding from United Nation Environment Program (UNEP) and Global Environment Facility (GEF) the framework was operationalized through the National Biosafety Framework Project in year 2010 under Bhutan Agriculture and Food Regulatory Authority (BAFRA) as BAFRA being the National Competent Authority for Biosafety.

This project would help Bhutan to strengthen its existing institutional and technical structures and systems needed to meet the obligations of the Protocol and have the National Biosafety Framework fully operational.

Project Objective

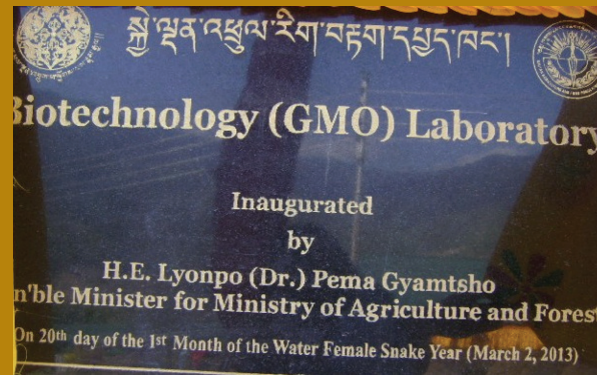
To make the National Biosafety Framework fully operational for the benefit of the people and environment of Bhutan consistent with the provisions of the Cartagena Protocol on biosafety and the Constitution of the Kingdom.

This project will contribute to:

- The implementation of the Bhutan's legislative framework on the safe use of biotechnology through regulations, orders, guidelines and procedures;
- The preparation of specific technical guidelines, forms and manuals;
- The strengthening of appropriate institutional structures for risk assessment and decision making;
- The development and implementation of policies for biotechnology and biosafety;
- The training of decision makers, scientists, and administrative and technical staff on legal and technical matters aspect of GMO;
- The setting up of a mechanism for monitoring and inspection of GMO;
- The strengthening of communication and information exchange relating to biosafety both at the national and international level;
- Creation of public awareness, education and participation in decision making on GMO;

- Enhanced regional cooperation on biosafety and biotechnology;

If you have any queries related to the activities of the project, you may contact our office at +975-02-339953 during office hour or visit www.bafra.gov.bt



What is GMO?

Genetically Modified Organism (GMO) is an organism whose genetic material has been altered using genetic engineering techniques.



How do we make GMO?

With the application of modern biotechnology, natural genes in plants and animals can be modified to select for desirable traits such as color, yield, and resistance to pests and diseases and any other traits more accurately by inserting, removing or modifying of the natural genes, the product of which is called as Genetically Modified Organism, abbreviated as GMO.

