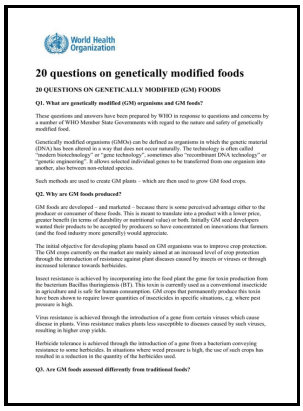
Genetically engineered toxins

Marcel Dekker, Inc. - Evidence of GMO toxin absorption and toxicity


World Health Organization

20 questions on genetically modified foods

20 QUESTIONS ON GENETICALLY MODIFIED (GM) FOODS

Q1. What are genetically modified (GM) organisms and GM foods?

These questions and answers have been prepared by WHO in response to questions and concerns by a number of WHO Member State Governments with regard to the nature and safety of genetically modified food.

Genetically modified organisms (GMOs) can be defined as organisms in which the genetic material (DNA) has been altered in a way that does not occur naturally. The technology is often called "modern biotechnology" or "gene technology", sometimes also "recombinant DNA technology" or "genetic engineering". It allows selected individual genes to be transferred from one organism into another, also between non-related species.

Such methods are used to create GM plants – which are then used to grow GM food crops.

Q2. Why are GM foods produced?

GM foods are developed – and marketed – because there is some perceived advantage either to the producer or consumer of these foods. This is meant to translate into a product with a lower price, greater benefit (in terms of durability or nutritional value) or both. Initially GM seed developers wanted food products to be accepted by producers so have concentrated on innovations that farmers (and the food industry more generally) would appreciate.

The initial objective for developing plants based on GM organisms was to improve crop protection. The GM crops currently on the market are mainly aimed at an increased level of crop protection through the introduction of resistance against plant diseases caused by insects or viruses or through increased tolerance towards herbicides.

Insect resistance is achieved by incorporating into the food plant the gene for toxin production from the bacterium Bacillus thuringiensis (BT). This toxin is currently used as a conventional insecticide in agriculture and is safe for human consumption. GM crops that permanently produce this toxin have been shown to require lower quantities of insecticides in specific situations, e.g. where pest pressure is high.

Virus resistance is achieved through the introduction of a gene from certain viruses which cause disease in plants. Virus resistance makes plants less susceptible to diseases caused by such viruses, resulting in higher crop yields.

Herbicide tolerance is achieved through the introduction of a gene from a bacterium conveying resistance to some herbicides. In situations where weed pressure is high, the use of such crops has resulted in a reduction in the quantity of the herbicides used.

Q3. Are GM foods assessed differently from traditional foods?

Description: -
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Toxins -- genetics.
Molecular Biology -- methods.
Genetic Engineering -- methods.
Recombinant toxins.Genetically engineered toxins
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Targeted diagnosis and therapy ;Genetically engineered toxins
Notes: Includes bibliographical references and index.
This edition was published in 1992

Filesize: 52.73 MB

Tags: #Genetically #Modified #Organisms: #Safe #To #Eat, #Safe #For #The #Environment?

GMOs

So whats the point of these traits if they get lost after a few generations? GMO Bt crop varieties constitutively synthesize these Bt toxins and can contain numerous different Bt transgenes 1 , each with somewhat different pest control properties. Naturally occurring toxins also known as Cry toxins of B.

Genetically modified animals

They identified a gene in a soil bacterium called , which produces a natural insecticide that has been in use for many years in traditional and organic agriculture.

Genetically Engineered Foods May be Far More Harmful than We Thought

The herbicide Glufosinate phosphinothricin, made by Bayer kills plants because it inhibits the plant enzyme glutamine synthetase. The European Union has banned GMOs, as have Australia, Japan, the UK and two dozen other countries that recognize that a lack of long term studies and testing may be hiding disastrous health defects. Most alarming of all, damage to the rats' stomach linings --apparently a severe viral infection -- most likely was caused by the CaMv viral promoter, a promoter spliced into nearly all GE foods and crops.

GMO Dangers: Facts You Need to Know

When that carbon mixes with oxygen in the atmosphere, it becomes carbon dioxide and contributes to global warming. After StarLink corn was genetically altered to be insect-resistant, there were several reported cases of allergic reactions in consumers. A genetically modified mosquito emerges from its pupa.

GMO Problems and Solutions

Allergies There is some concern that GMO foods may trigger an allergic reaction. Lost Traits The potatoes contain genetically unstable traits which are being lost over time.

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