

**SOUTHERN ACTION ON  
GENETIC ENGINEERING  
( SAGE )**

**RIGHT TO SAY  
NO TO GMOS**

*HOW WILL G M FOODS  
IN YOUR DIET  
IMPACT YOUR HEALTH?*

**WORLD CONSUMERS DAY  
2011**

# RIGHT TO SAY NO TO GMOS

## **What is GMO food?**

Genetically modified organisms (GMOs) are organisms whose genetic material (DNA) has been altered in an unnatural way. The technology allows selected individual genes to be transferred from one organism into another, also between non-related species.

## **Are GM foods safe?**

Different GM organisms include different genes inserted in different ways. This means that individual GM foods and their safety should be assessed on a case-by-case basis. It is not possible to make general statements on the safety of all GM foods. In the case of food, consumers worldwide are concerned about safety because they perceive that modern biotechnology is leading to the creation of new species.

Consumers have questioned the validity of risk assessments being made currently, both with regard to consumer health and environmental risks. In both these areas there appears to be no focus on long-term effects. Consumer organizations have also been debating allergenicity [production of allergy] and antimicrobial resistance. Consumer concerns have triggered a discussion on banning GM foods allowing the consumers to assert one's personal choice of foods without compromise. In other words right for informed food choices.

## **Some scholars and scientists have recorded the health risks due to the consumption of GM Foods**

Working with more than 30 scientists worldwide, Prof Jeffrey Smith of the Institute for Responsible Science, USA has documented 65 health risks of GM foods. His documentation asserts that

***There are thousands of toxic or allergic-type reactions in humans, thousands of sick, sterile and dead livestock, and damage to virtually every organ and system studied in laboratory animals***

**Significant health impacts of GM foods that have been documented in his study *Genetic Roulette* are quoted below:**

- o **Pregnant mothers eating GM foods may endanger offspring**

Embryo development can be adversely affected by tiny amounts of substances in the mother's diet.

GM crops may contain substances that impact normal foetal development,

A pregnant mother's diet may even alter gene expression in children and be passed on to future generations.

- o **GM foods are more dangerous for children than adults**

Children are generally more susceptible to toxins, allergens, and nutritional problems.

*"Swapping genes between organisms can produce unknown toxic effects and allergies that are most likely to affect children."*

- o **GM potatoes damaged rats**

Rats were fed potatoes engineered to produce their own insecticide, They developed potentially precancerous cell growth in the digestive tract, inhibited development of their brains, livers, and testicles, partial atrophy of the liver, enlarged pancreases and intestines, and immune system damage.

- o **Rats fed GM tomatoes got bleeding stomachs, several died**

Rats were fed the GM FlavrSavr tomato for 28 days.

Of the 20 rats, 7 developed stomach lesions (bleeding stomachs); another 7 of 40 died within two weeks and were replaced in the study

- o **Mice fed GM Bt potatoes had intestinal damage**

Mice were fed either GM potatoes engineered to produce to Bt-toxin or natural potatoes spiked with Bt-toxin.

Both diets created abnormal and excessive cell growth in the lower part of their small intestine (ileum).

Similar damage to the human small intestine might result in incontinence or flu-like symptoms, and may be precancerous.

- o **Most offspring of rats fed Roundup Ready soy died within three weeks**

Female rats were fed Roundup Ready soy starting before conception and continuing through pregnancy and weaning.

Of the offspring, 55.6% died within three weeks compared to 9% from non-GM soy controls.

Some pups from GM-fed mothers were significantly smaller and both mothers and pups were more aggressive.

In a separate study, after a lab began feeding rats a commercial diet containing GM soy, offspring mortality reached 55.3%.

5. **When offspring from GM-fed rats were mated together, they were unable to conceive.**

- o **A GM food supplement killed about 100 people and caused 5,000-10,000 to fall sick**

One brand of the supplement L-tryptophan created a deadly US epidemic in the 1980s.

The company genetically engineered bacteria to produce the supplement more economically.

Their product contained many contaminants, five or six of which were suspected as the cause of the disease.

Discovering the epidemic required multiple coincidences, suggesting that adverse reactions to GM foods may be hard to identify.

Probiotic expert S.K. Dash calls the healthy bacteria in our guts our first line of immune defense, as these tiny bacteria protect us from all sorts of problems. Everything from cancer to IBS to allergies and most every disease imaginable is connected to our healthy bacteria. But there's one problem. **Eating one serving of GMO foods has been found to change the genetic structure of our healthy bacteria. Literally, some GMO foods might be altering our healthy bacteria so they'll now produce concentrated pesticides in our guts for the rest of our lives.**

As a consequence, in the USA which has the longest history of growing and consuming GE foods, 29% of Americans are strongly opposed to GM foods and believe they are unsafe. **A growing number of**

doctors are prescribing a non-GM diet. Next year, the US natural food industry will remove all remaining GM ingredients and non-GM shopping guides will appear in stores across the USA.

### Do we have GM foods in India?

Officially, India does not have GM food crops in cultivation. However, it is possible that some food crops like papaya are being cultivated illegally. Many food products especially those prepared from imported corn [maize] and soybean are likely to contain GM ingredients. Imported foods like tofu, soya nuggets, soya milk, corn chips, sweet corn, tomato puree etc. may have GM ingredients.

Our Supermarkets sell thousands of products which contain GM ingredients /derivatives/enzymes and we pay premium price for some of them. Our KIDS favourite processed foods MIGHT BE GENETICALLY CONTAMINATED

Most of US corn and Soy, also 60% of Canola are genetically modified and so is most of the cotton grown in India. **Oils** from all these sources **GENETICALLY contaminate** our foods everyday. Some popular brands used in our restaurants are owned by GM companies under Indian brand names

### How can I avoid GM foods?

Do not buy any imported foods that contain corn, soybean, potato or tomato. These foods have a high probability of being genetically engineered. There is no way of knowing for sure if the imported food contains GM ingredients since no company provides this information on the label. Therefore the safest route is to avoid such foods. Tell your families, friends and colleagues about the risks of GM food and help them to avoid serious health risks.

### WHAT CAN WE DO AS CONSUMERS?

#### We are not helpless. Let us

- ✿ Demand ban on GMO foods
- ✿ Share this information with people
- ✿ demand government for protection of consumer right to safe food
- ✿ Raise awareness
- ✿ Sign petitions
- ✿ Embrace organic foods

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