

General Studies-3; Topic– Science and Technology- developments and their applications and effects in everyday life

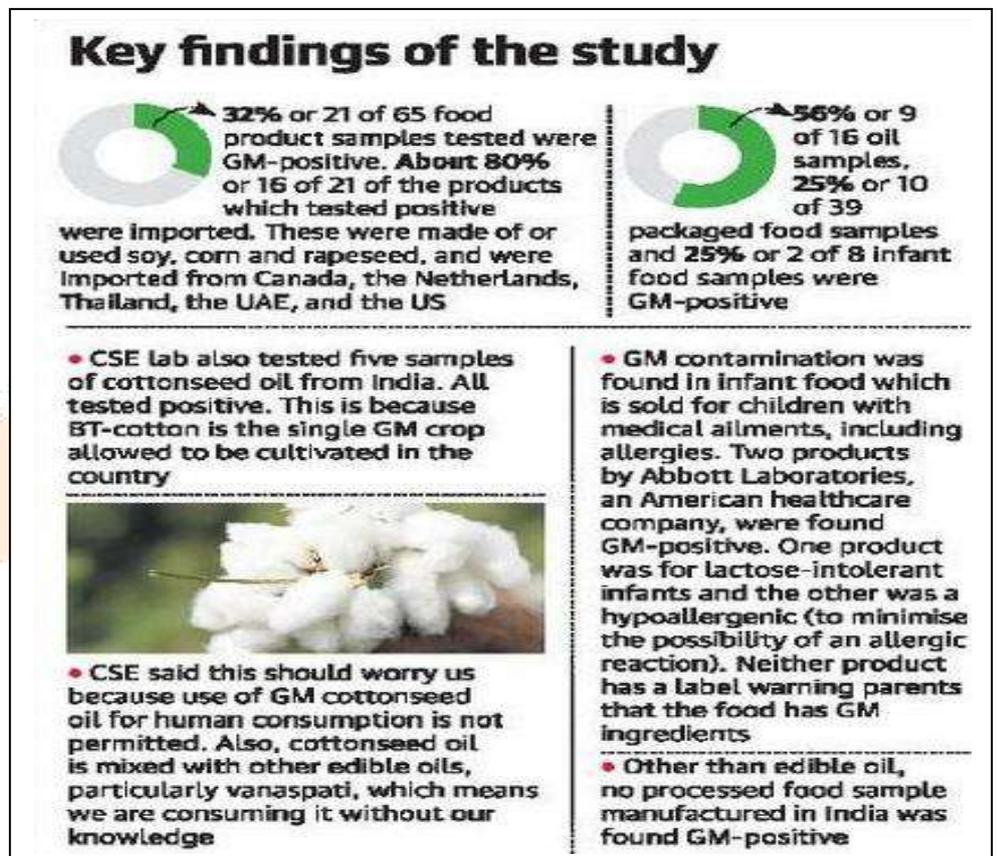
Genetically-modified (GM) Processed Food

1) Introduction

- Despite India's law barring genetically modified (GM) foods from being produced or sold in the country without government approval, a study by Centre for Science and Environment (CSE) found that Indian markets are inundated with GM foods.

2) CSE Study

- Centre for Science and Environment (CSE) has found the GM presence in edible oils, processed and packaged foods, and infant foods.
- The CSE study was done based on tests conducted on samples from Delhi-NCR, Punjab and Gujarat.
- Experts said GM food items could be easily found in other parts of the country too.
- Of 65 food products available in the Indian market, 32% tested GM-positive.
- Both imported (35) and domestically produced (30) samples were tested.
- Imported samples fared the worst as 80% of the products that were found to be GM-positive were imported.
- Most of these are imported from the US, Canada, the Netherlands, Thailand, and the UAE.
- These products were produced from or contain soya, cottonseed, corn or rapeseed (canola), which are known GM crops of the world.
- GM processed food cannot be sold or traded in India without government approval, but it is widely sold without any control from health and food regulators.
- Most GM foods did not disclose GM on their labels.
- A few also made false claims of being GM-free.



3) GM Laws in India

- A GM crop is developed through inserting the DNA of another creature into the targeted plant's DNA for the purpose of enhancing its productivity and/or increase its immune power.

- Apart from import of GM seeds and production of such food items, research and development of GM crops is also banned in India.

4) International Practice

- The scientific community is divided on the health and environmental impacts of GM food, but most countries place rigorous checks before allowing them.
- The EU, Australia, New Zealand, Brazil and South Korea have made it mandatory to label GM food so that consumers can choose what they eat.
- A large number of countries including Japan, Canada, Thailand and Indonesia prescribe a threshold value of 5 per cent by weight.
- Threshold level for labelling of GM foods refers to the maximum permissible level of unintentional and technically unavoidable GMO content in food that does not call for labelling.

5) Concerns / Challenges

- The Food Safety and Standards Authority of India [FSSAI], the apex food regulator, has failed to curb the illegal sales of GM food.
- Its draft regulations on GM food labelling are weak and impractical to implement.
- GM food involves taking genes (DNA) from different organisms and inserting them in food crops.
- There are concerns that this 'foreign' DNA through Genetically Modified products may lead to risks such as toxicity, allergic reactions, and nutritional and unintended impact.
- It costs people's health and our national food and health sovereignty.

WHAT DO LAWS SAY?

- The Environment Protection Act (EPA) strictly prohibits import, export, transport, manufacture, process, use or sale of any genetically-engineered organisms except with approval of the Genetic Engineering Appraisal Committee (GEAC) under the Ministry of Environment, Forests and Climate Change

- The Food Safety and Standards Act (FSSA), 2006, prohibits import, manufacture, use or sale of GM food without FSSAI approval

- Legal Metrology (Packaged Commodities) Rules, 2011, mandate that GM must be declared on food package

- Foreign Trade (Development and Regulation) Act, 1992, said GM food cannot be imported without the permission of the GEAC

- Anyone who imports, manufactures, uses or sells GM food is liable to be prosecuted under the above Acts

6) Way Forward

- To curb the large-scale illegal presence and sale of GM-foods, FSSAI must set necessary approval processes and make stringent labelling standards.
- Set up laboratories to check for GM foods.
- Take action against those responsible for bringing such foods illegally into the market.
- Screening of all foods made from or likely containing GM ingredients in the country.
- FSSAI should setup systems and enforce GM screening.