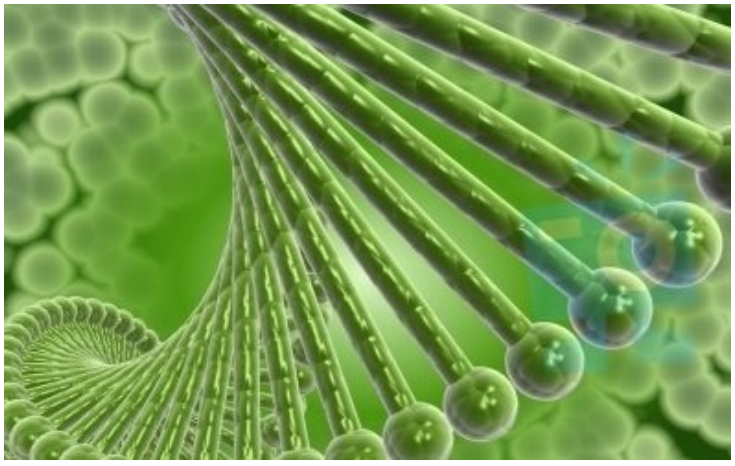
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MORATORIUM OR NO MORATORIUM

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The use of r DNA technology in Agriculture has revolutionized food production of the world. The scientists using this technology has been able to produce herbicide resistant, insect resistant and disease resistant plants. In addition to this use of biotechnology tools have given us more nutritious and flavorful foods like golden rice and flavor-saver tomatoes.

Thus biotechnology has given us more abundant, flavorful and nutritious foods produced with less dependence on pesticides and herbicides. Indiscriminate use of pesticides in food and non-food crops is creating health problems and may become the major cause of dreaded disease like cancer.

Minimum use of pesticides on crops can save us from this dreadful disease. This has been further strengthened by the commitment of Agriculture and Processed Food Products Export Development Authority of India that our several food products have been rejected by several countries based on amount of pesticide residues. To cite example, America does not like our chili powder, Russia and Italy is against purchase of rice and during last five years European Union has rejected several of our food products in more than 800 different cases. This rejection is totally based on high amount of pesticide residues on our products and non-compliance of International standards about pesticides residues.

The world population is expected to rise to 12 billion by the year 2030. It is a big dilemma to feed such a large population. Agricultural biotechnology will play a major role in resolving this problem.

More than 30 countries of the world are growing GM crops on more than 400 million acres of land. This includes both developed and developing countries like USA, China, Brazil, Canada, Argentina, India, South Africa etc. India allowed commercialization of Bt cotton ten years ago. Today more than 10 million hectares of land is under cotton cultivation and 92% of the total area is under Bt cotton.

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India became an exporter of cotton from importer of this fibre. Yet there is a vocal opposition by minority while silent majority watches in dismay. Anti GM activists are vehemently opposing the use of this technology for other crops. Three years back India did not permit the commercialization of Bt brinjal which was a big blow to use of biotech for improvement of crops.

In spite of the fact that several scientists were involved and lot of money was spent on risk analysis, Bt brinjal did not win the approval of regulators in India. The squeeze is still demoralizing Indian scientists as they are not getting enough funds for research in this field and may be left far behind in the skills in this technology.

Today more than 400 million acres of land in some thirty different countries grow GM crops. Over three trillion servings of food have been consumed without any harm to human health. For last 20 years' experience with GM crops, there has not been a single confirmed incidence of harm to human health or disruption of ecosystem. A doubt has been raised that use of GM maize in USA has increased the incidences of allergy cases. A report from Colorado State University, USA published by F. B. Paeirs (Aug. 2010) states that Delta endotoxins and vegetative insecticidal protein (VIP) produced by the currently available events are all broken down in the stomach of humans and thus are not potential allergens.

A feature article in NATURE entitled, "How Safe Does Transgenic Food Need To Be" by Laura DeFrancesco, Senior editor of Nature-Biotechnology has clearly described that transgenic crops are the most highly regulated foods in the world. Citing the example of genetically modified sweet corn which has been the part of American diet since 1998 when SYNGENTA'S insect protected corn was approved, no untoward health effect has been reported since then (Nature-Biotechnology, Vol.31 No. 9 Sept. 2013).A review article, "An overview of last ten years of genetically engineered crop safety research by Alessandro Nicolia et.al published in Informa healthcare, 2013 clearly states that scientific research conducted so far has not detected any significant hazards directly connected with the use of GE.

The grounds on which anti GM activists protest are cynical based on unfounded skepticism. Many such anti GMO activities are influenced by financial support from industries that has developed a paranoia for sale of their product. It has become a vicious game derived by loud screaming minority while silent majority and rural communities suffer in a deteriorating pesticide and fertilizer run off environment where a clean glass of drinking water is hardly affordable.

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This game promoted by few has killed our conscious and reconstructed our character. The anti GM activity and moratorium was largely based on a publication by Gilles-Eric-Seralini that claimed to show that genetically modified corn could lead to a high incidence of cancer. In a stunning development, Journal of FOOD and CHEMICAL TOXICOLOGY, which published this

controversial rat study RETRACTED this publication and evidence of it expunged from the Journal's database. Bowing to scientists' near universal scorn, Journal of Food and Chemical Toxicology has retracted a controversial paper (G.E. Seralini et.al., Food and Chemical Toxicology, 50: 4221 - 4231: 2012) that claimed that Monsanto's genetically modified corn causes serious disease in rats.

The author has earlier refused to withdraw it. The paper showed no evidence of fraud or intentional misrepresentation of the data. Said a 28thNovember 2013 statement from publisher's Elsevier but the small number and type of animals used in the study mean that "No definitive conclusions can be reached.

Though transgenic crops are not the final answer to all our agricultural problems. At present one cannot ignore this sunrise technology which has revolutionized the world agriculture by improving yield and making them more nutritious. Organic farming though safe when practiced on a large scale cannot meet the food requirement of highly progressing population of our country. Introduction of a foreign gene simply helps to achieve its full potential and productivity without any yield loss due to stress.

The game is between carcinogenic pesticides V/s GMO. The choice is between GMOs and toxicity of pesticides. It's now the Indian public who will decide whether to eat food loaded with pesticide residues or eat healthier, nutritious and flavorful food. Beneficiary of new technology are people. Pesticides do not discriminate people, then why should technology?