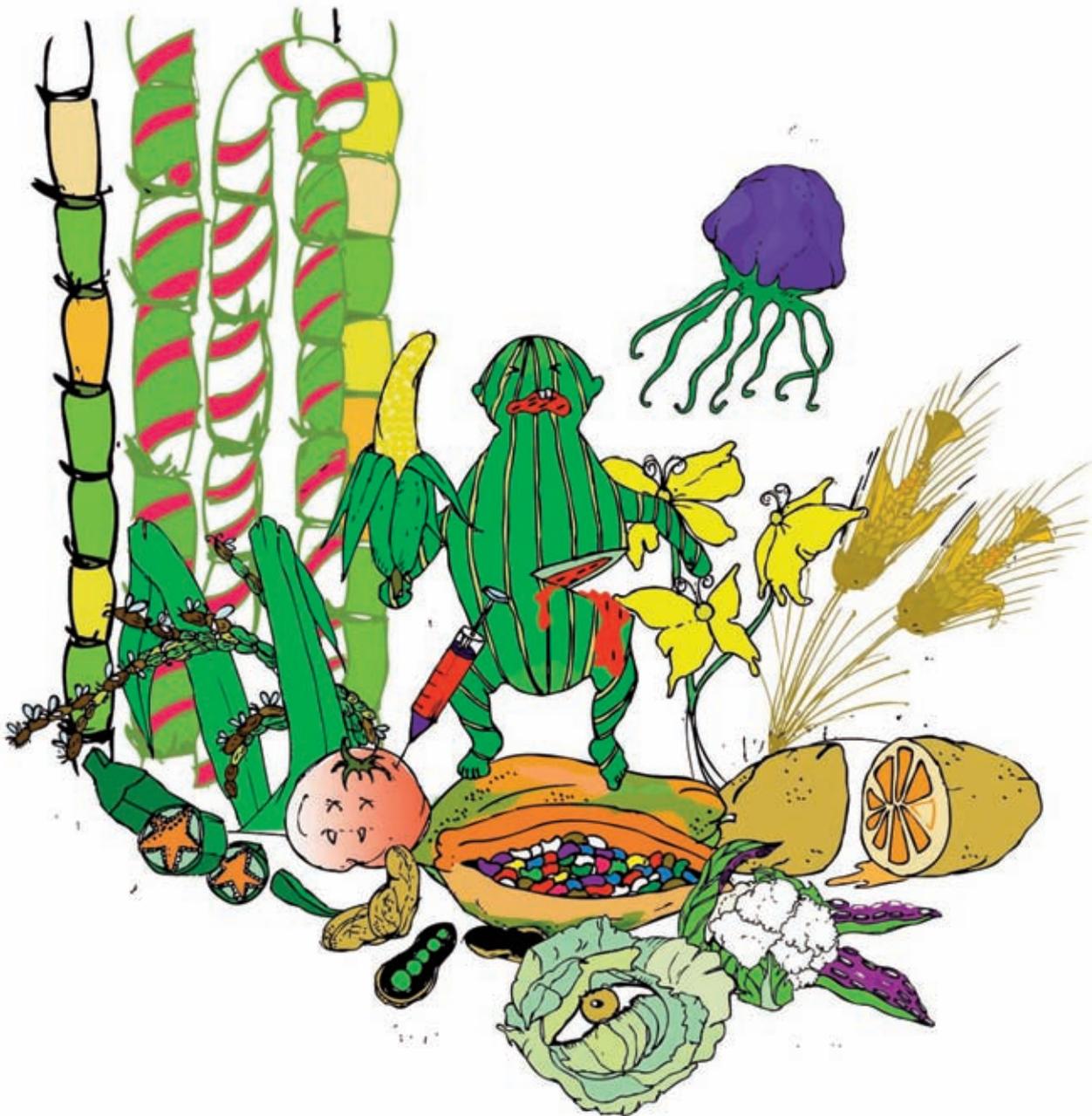


THE TRUTH ABOUT

GM FOODS

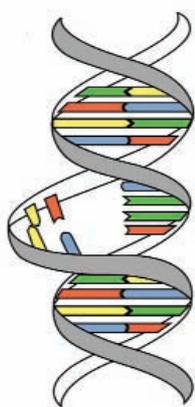
A REPORT BY THE EARTH OPEN SOURCE



THE GENETIC ENGINEERING TECHNIQUE



It is unnecessary to take risks with GM when conventional breeding – assisted by safe modern gene mapping technologies – is capable of meeting our crop breeding needs.



Myths	Truths
Genetic engineering is just an extension of natural breeding	Genetic engineering is different from natural breeding and poses special risks and may develop unexpected toxic or allergenic effects and nutritional disturbances.
Genetic Engineering is precise and the results are predictable.	Genetic Engineering and associated tissue culture processes may lead to unpredictable changes in the DNA, proteins and biochemical composition of resulting GM crop.
Cisgenics/Intragenics is a safe form of GM because it uses genes from the same species that has to be engineered.	They are just as risky as any other GM food

FEEDING THE WORLD



GM is not needed to feed the world. Conventional plant breeding has already delivered crops that are high-yielding, disease- and pest-resistant, tolerant of drought and other climatic extremes, and nutritionally enhanced – at a fraction of the cost of GM.

Myths	Truths
GM crops are needed to feed the world's growing Population	GM crops are irrelevant to feeding the world
GM crops are vital to achieve food security	Agroecological farming is the key to food security. A report by International Assessment of Agricultural Knowledge, Science and Technology for Development noted that yield from GM crops were variable and better solutions were available for ensuring food security.

SCIENCE AND REGULATION



The regulations in most part of the world are too weak to protect consumers from the hazards caused by the technology.



Myths	Truths
GM foods are strictly regulated for safety	<p>GM food regulations in most countries vary from non-existent to weak</p> <ul style="list-style-type: none"> ● Regulations in US assume a GM food safe if its certain basic constituents are substantially equivalent to its non GM counterpart ● The same concept applied in EU, is called "comparative safety assessment" ● In India, there are no specific provisions about GM foods in Food Safety and Standards Act. The labeling of GM foods is not yet functional.

CLIMATE CHANGE AND ENERGY USE



Myths	Truths
GM will deliver climate-ready crops	Conventional breeding outstrips GM in delivering climate-ready crops
GM will solve the nitrogen crisis	GM has not delivered nitrogen-efficient crops
GM crops reduce energy use	GM crops are energy-hungry



GM will not solve the problems of climate change. Tolerance to extreme weather conditions involves complex, subtly regulated traits that genetic engineering is incapable of conferring on plants

HEALTH HAZARDS OF GM FOODS



The studies conducted on animals have been short term or medium term. Long term and multigenerational studies are needed to establish if the problems found in short and medium term studies are persistent and growing.



Myths	Truths
GM foods are safe to eat.	Studies show that GM foods can be toxic and allergenic.
Those who claim that GM foods are unsafe are being selective with the data, since many other studies show safety.	Studies that claim safety for GM crops are more likely to be industry-linked and therefore biased.
GM foods have been proven safe for human consumption.	The few studies that have been conducted on humans show problems.
No one has ever been made ill by a GM food	There is no scientific evidence to support this claim
GM Bt insecticidal crops, which produce Bt toxin to counter insects, only harm insects and are harmless to animals and people	GM Bt insecticidal crops pose hazards to people and animals that eat them
GM foods are properly tested for ability to cause allergic reactions	No thorough allergenicity testing is conducted on GM foods
Genetic engineering will deliver more nutritious crops	No GM crop that is more nutritious than its non-GM counterpart has been commercialized and some GMOs are less nutritious.

IMPACT ON FARMS AND ENVIRONMENT



Coexistence between GM and non-GM crops is impossible as non-GM and organic crops become contaminated, resulting in lost markets and massive economic losses.



Myths	Truths
GM crops increase yield potential	GM crops do not increase yield potential – and in many cases decrease it
GM crops decrease pesticide use	GM crops decrease insecticide use but increase herbicide use
No-till farming with GM crops is environmentally friendly	No-till farming can be and is practiced in chemical based and agro-ecological farming. Farmers do not have to adopt GM crops for it.
GM crops help biodiversity	The herbicides used with GM crops harm biodiversity
GM crops bring economic benefits to farmers	Economic impacts of GM crops on farmers are variable. The US Department of Agriculture found the economic impacts of adopting GM crops on farmers from mixed or even negative.
GM crops can “coexist” with non-GM and organic crops	Co-existence means widespread contamination of non-GM and organic crops
If GM contamination occurs, it is not a problem	GM contamination has had severe economic consequences for farmers, food and feed companies, and markets