GOOD FOOD
MAKES EVERYTHING BETTER

GMOs

GENETIC ENGINEERING technologies in farming and food have been controversial from the moment they were first introduced.

Although the biotechnology companies that produce genetically modified (GM) crops claim these are the same as naturally bred crops, the World Health Organization (WHO) defines a genetically modified organism (GMO) as: "...organisms (i.e. plants, animals or microorganisms) in which the genetic material (DNA) has been altered in a way that does not occur naturally..."

Plants produced by GM technology are new to our environment and new to the human diet. Humans have been farming for around 12,000 years; GMOs have only been in our food system for 20 years.

In addition, GMOs were released into the human food chain without any safety testing – and biotech companies have strongly resisted calls for such testing for many years.

They were also released into nature without understanding how they might alter fragile ecosystems or even change farming practice – for good or for bad.

In short, GMOs have turned our food system into a large uncontrolled experiment, with some disturbing consequences.

Whilst vocal opposition to GMOs has largely kept them out of Europe, the Americas were quick to adopt them; today 41% of all GM crops worldwide are grow in the US alone.

PROMISES BROKEN

Farmers in the US embraced two key promises: that GMOs would increase yields and lower the use of expensive pesticides, leading to more profitable farming.

But studies show that yields have been highly variable and chemical costs have grown as both weeds and insects have become resistant to the pesticides used on GM crops.

GMOs

In addition, the cost of the patented seeds, which cannot be legally saved for replanting, is now around 3-6 times that of conventional seed.
Because there are only 4 main GM crops – maize, soya, canola and cotton – GMOs encourage large monocultures that damage biodiversity and the diversity of our diets.

GMOs also cause problems for farmers who don't plant them. Cross-pollination between related species means that non-GM farmers can find GM crops growing on their land. Likewise, GM and non-GM seeds can be mixed together during storage. This contamination can cost farmers valuable export licenses or organic certification, and ruin livelihoods.

FEEDING THE WORLD?

GMOs have also promised to improve nutrition and feed the world. These promises remain unfulfilled – but are also unnecessary.

Naturally bred crops with special properties – such as drought or flood resistance, or nutritional benefits such as high antioxidant tomatoes, or beta carotene-rich bananas – already exist. We can grow and eat them today – rather than waiting decades for a GM variety.

Promoting GMOs as a way to 'feed the world' distracts us from the key issues of poverty, lack of access to food and, increasingly, lack of access to land to grow it on.

Hunger, as noted in a recent United Nations report, is not caused by a food shortage but by "a lack of purchasing power and/or the inability of the rural poor to be self-sufficient." GMOs are not, and cannot, solve these fundamental problems.

HEALTH CONCERNS

Even if they could, the fact remains that most people simply don't want to eat GMOs because of concerns about safety. In fact, in 2015, nearly 300 scientists published a letter saying there was no scientific consensus on the safety of eating GMOs and that existing evidence suggests real potential for harm.

Some of this harm is linked to higher levels of the herbicide glyphosate (Roundup) which is used on GM crops and which inevitably finds its way into our food.

Most recently glyphosate has been declared a 'probable human carcinogen' by the International Agency for Research on Cancer, a branch of the WHO.

Emerging evidence in laboratory animals fed GM feed has revealed health problems including hormone disruption, problems with kidneys, liver and reproductive organs, poor fetal growth and tumours.

EUROPE IS NOT 'SAFE'

Because Europe has managed to avoid GM crops for so long, many feel we are now 'safe'. But this is not the case. EU legislation has changed recently to allow individual Member States to begin planting GM crops.

Over the years, supermarkets have begun to stock products made with GM ingredients.

In addition, around 60% of animals in the EU are currently fed on GM feed. There is no requirement for the meat, milk and eggs from these animals to be labelled. This means that consumers wishing to avoid GMOs cannot make informed food choices.

BREAKING FREE

GMOs are a symptom of a broken food system, not a solution to it. They keep us tied to expensive, high input, wasteful – and harmful – agriculture.

Feeding the world requires that we recognise the impact our food system has on many areas of life such as soil, nutrition, climate, health and environment.

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The most productive alternatives to the current model of technological, chemically intensive farming come from 'agroecology' – farming methods such as organic, biodynamic and permaculture – that work with nature, and culture, to increase food security.

30 years of research have shown that organic yields equal those of conventional crops. Yet instead of investing in methods like these, as recommended by the 2008 IAASTD report, we continue to pour money into GM food technology.

If we want a sustainable food system, one that gives all farmers the opportunity to provide well for their communities, then we must invest more time, effort, science and money in alternatives that are working now, not promises that have little chance of being fulfilled in the future.

BEYOND GM

This leaflet is part of a series on sustainable food issues, produced by Beyond GM. References available online:

beyond-gm.org/good-food