

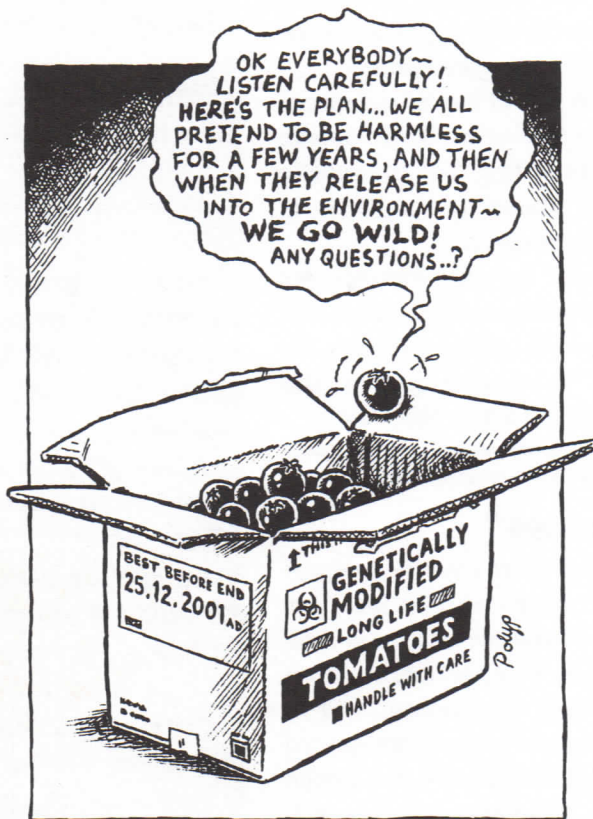


Global express

The rapid response information series for schools
on world events in the news

Monster tomatoes or bumper harvests

Will GM foods feed or harm us?



AS THE MEDIA DEBATE THE BENEFITS of genetically modified (GM) food for our lives, European supermarkets are beginning to get rid of GM products from their shelves and some farmers in developing countries claim there's more to lose than gain from GM crops.

Global express looks at the arguments for and against this new technology.

What is
Global express?

Global express helps you teach about topical global issues and events.

Contains

Instant photocopiable classroom activities for 8 to 14 year olds.

Primary

- Where does our food come from?
- Carry out a questionnaire
- What is genetically modified food?

Secondary

- Designer genes for designer jeans
- Try the quiz
- Join the debate

Curriculum

- Ideas for Literacy Hour
- Science
- Geography
- RE and Citizenship

Food and new technology

For centuries farmers have bred their best plants and livestock in order to produce more and stronger crops and animals. But during the last 50 years, it is science that has had the biggest impact on how we produce our food - from injecting cows with chemicals in order to produce more milk, to growing more food on the same amount of land. But now science is taking us into a new field, as more of our food begins life not on the farm but in the laboratory.

Fact or fiction

Genetic engineering is a new and complicated subject. Because of this, nobody, not even scientists, know exactly what the long-term effects might be.

Most of the public debate about genetically-modified (GM) food has been led by the media. Many scientists argue that much of the public reaction and criticism against GM food is ill-informed and sometimes 'hysterical', fanned by 'irresponsible' reporting. Several newspapers and magazines have referred to GM food as 'Frankenstein' or 'mutant' and have even printed faked pictures such as a genetically modified corn-on-the-cob with a fish's head. The journalists claim they are only responding to pressure groups that campaign against GM crops and food in the UK. These aim to raise public awareness and backing. Some people feel so strongly that they have taken action and been arrested for uprooting GM plants from fields.

But large companies like Monsanto, who are investing heavily in GM crops are also trying to influence public opinion through expensive public relations and advertising campaigns aimed at showing the benefits of the technology.

Science and ethics

Fear and distrust of science is not new and what people think of as fact often

changes over time. In the 17th Century, when the Italian astronomer, Galileo, publicly stated that he believed the earth went around the sun and not the other way round, he was arrested and forbidden to express his views.

But sometimes people do have cause to be scared about the impact of new technology, and even scientists change their minds.

On July 16, 1945, Dr Robert Oppenheimer, one of the inventors of the atomic bomb, witnessed its first explosion in the New Mexico desert. "We knew the world would not be the same," he said at the time. After the war, Oppenheimer openly voiced his opposition to the development of the more powerful hydrogen bomb.

Apart from fear of the consequences of certain technologies, some people believe that meddling with the genetic make up of plants and animals is immoral or sacrilegious.

'Mixing genetic material from species that cannot breed naturally, takes us into areas that should be left to God. We should not be meddling with the building blocks of life in this way.'

The Prince of Wales in a statement on his website
<<http://www.princeofwales.gov.uk/>>

Who decides?

In the UK and other countries groups of experts are set up to discuss the rights and wrongs of controversial scientific research, such as experimenting on human foetuses or cloning, and to advise governments if laws are needed to regulate new technology. But public opinion does not always coincide with that of the experts.

'People have deep worries [about science]. They may not be very rational, but they can't be dismissed. In the end, we live in a democracy where the public must have the last word.'

Sir John Houghton, former chairman of the Royal Commission on Environmental Pollution,
FT 6/10/98

Quotes

"There is no scientific evidence to justify a ban [on GM foods]."

Tony Blair, Britain's Prime Minister,
GM Free, April 1999

"Organisations such as Greenpeace and Friends of the Earth have long understood the power of icons, imagery and suggestion in manipulating the general mood."

FT editorial, 20.2.99

"People are rightly concerned about such issues as BSE, genetic engineering, health, drugs, the environment, cloning and the way in which technology dominates so many aspects of their lives. Scientists need to communicate the big picture more effectively, in terms which are accessible and meaningful to different sectors of society."

Professor Susan Greenfield, Director of the Royal Institution of Great Britain, 13.10.99

"Once released into the environment, unlike a BSE epidemic or chemical spill, genetic mistakes cannot be contained, recalled or cleaned up, but will be passed onto all future generations indefinitely."

Dr Michael Antoniou, Clinical Geneticist and Senior Lecturer in Molecular Pathology, London

"What we are witnessing is one of the greatest revolts against a new technology in history. We will see whether this revolt will be judged by history as a triumph of new democracy..or a backward response to inevitable 'progress'."

John Vidal, *The Guardian*, 23.3.99

"The biological world cannot be owned or controlled by corporations, or any other interests, as it is a collective resource that has evolved and been generated over centuries."

Tewelde Egziabher, Ethiopian delegate to the Conference of Parties IV to the Convention on Biological Diversity.



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