6 The right to know. The right to choose

There has been no public policy process to determine the use of GE in South Africa, and decision-making has been characterized by a lack of transparency and denial of access to information, as witnessed in the High Court case between Biowatch South Africa, Monsanto and the Department of Agriculture. Civil society is unable to determine whether the proliferation of genetic engineering in South Africa is safe and compliant with South African law, the Constitution, and international environmental standards.

Litigation brought in the public interest by Biowatch South Africa and the Human and Community in the Conservation and Sustainable Use of Biological Resources, Darwin Initiative Lecture, March 2002.


Biodiversity: A Threat to Our Future?

Further reading


Website

www.biowatch.org.uk

www.etgroup.org

www.greenpeace.org

www.tiwic.de

Six reasons why Africa is concerned about genetically engineered crops

1 Ethical concerns

Genetic engineering (GE) tinkers with the very essence of life. Species are mixed together that would never naturally reproduce. Through patenting seeds and genes, life can now be owned by corporations. Through contamination of natural wildlife and plants, GE forever compromises the rights of future generations to a safe, healthy and diverse environment.

The advent of GE has allowed for genetic material, including seed, plants, animal and human genes to be patented and genetically modified organisms (GMOs) are, without exception, patented. Life forms can now become the intellectual property of an individual or a multinational corporation.

Many religious people and those who have a strong sense of social justice feel that it is unethical and wrong for individuals or companies to own life. Biological organisms, including plants, bacteria, and animals, are seen as the common heritage of the human race. It is our responsibility to care for biodiversity and also to share it with other human beings and leave it in good conditions for our children’s children.

Seed is the beginning of life and the first step in the food chain. Subjecting this precious resource to corporate ownership and greed has no place in Africa where 90% of the total seed planted is farm-saved, and where free access to a diversity of seed is essential for the survival of your communities.

2 Economic justice

Economic injustices are entrenched by GE as it fuels corporate domination and control of seed and pharmaceuticals. Genetic engineering further tip the trade balance in favour of countries in the North and increases the flow of resources and knowledge from the South.

In Africa, GMOs are marketed as a solution to poverty and food security and an opportunity African farmers should not miss. South Africa grows GE crops and produces enough food to feed itself, so why are our people going hungry? The belief that GE crops can alleviate hunger disregards many factors such as high input costs, infrastructure and above all the distribution of wealth and power. The claim that GE will feed Africa is irresponsible, as it is not a lack of good seed or technology that is keeping the African farmer down, but global structural defects resulting in economic injustice.

The Agreement on Trade-Related Intellectual Property Rights (TRIPs) of the World Trade Organisation (WTO) imposes an ‘economic necessity’ of access to food and seed and the patented to significantly reduce genetic diversity. TRIPs and the use of patenting technologies knowledge from farmers and indigenous peoples is the result of a struggle for control of the distribution and wealth generation in the hands of multinationals. This has led to the erosion of Africa’s biodiversity and the depredation of traditional practices and indigenous knowledge.

Commercialisation of GE seeds and plants have driven the loss of traditional varieties of crops. This process is commonly referred to as biopiracy – biopiracy is not the result of the exchange of intellectual property, it is a form of horizontal and non-consensual piracy that is stealing the traditional practices and indigenous knowledge that is keeping the african farmer down, but global structural defects resulting in economic injustice.
Over the past few years the so-called ‘life industry’ has grown exponentially and companies are taking over monopoly patents on information, technology and biological organisms and increasing their market share through mergers, acquisitions and vertical integrations of their interests in pharmaceuticals, seeds and agro-chemicals. This has resulted in unprecedented corporate control over the basics of life.

Five giant corporations dominate the US$45 billion global market for GE seed, with income coming from seed sales and the technology fees farmers have to pay for using patented seeds. They are selling only two types of GE crops: herbicide resistant crops that allow the farmer to spray more herbicides and crops that behave like insects.

3 Social impacts

Instead of being a panacea to the problem of hunger in Africa, GE crops threaten rural livelihoods, food security, and local control over genetic resources. Genetic engineering threatens local livelihoods by undermining farmers’ rights to save seed. Seed security is the first step in food security but GE and seed patents take this right away from farmers.

The patenting of seed restricts the traditional right of farmers to save seeds from year to year. It also reduces the role played by farmers in breeding and selecting their own seed. It allows companies to apply for patent rights over plants traditionally used by farmers in Europe and the rest of the industrialised world. The GE debate has centred on public health and environmental safety. For developing countries on the other hand, the ability of farmers to control how they use their seed is a question of survival and the basis of their food security.

In spite of the marketing hype that GE will feed the world, there is no crop on the market yet that has the potential to achieve this. The main GE crops currently planted are soy and maize, and these are used mainly for animal feed, not food. GE cotton is also planted, but this is a cash crop where farmers rely on credit and is notorious for getting farmers into debt.

The GE crops on the market are aimed at benefiting large-scale commercial producers and biotechnology companies. These crops are all either insecticides or are herbicide resistant, and have to be managed in conjunction with the companies’ chemicals. Another need of large-scale producers, to save on labour and being addressed by GE crops. For example, coffee, a source of labour for millions around the world, is being genetically engineered to ripen simultaneously, enabling mechanical harvesting. South African commercial farmers planting GE crops mention saving on labour as one aspect they save on, something our rural areas cannot afford. The needs of Africa, such as drought and salinity tolerance, or improvements in nitrogen fixation, are not a priority for the biotechnology industry and a GE solution to these problems has yet to be found.

For agribusiness the emphasis is on products that generate sales large enough to recoup investment and generate profits: poverty alleviation, food security, and environmental sustainability simply do not factor in this value system.

4 Health impacts

The health impacts of genetically engineered foods are uncertain but many health professionals are alarmed, in particular about the impact on infants and people with compromised immune systems.

The health threats of GE foods include allergens, uncertain toxic effects, antibiotic resistance and reduced nutritional quality. In Africa, we are particularly concerned about the impact of GE foods on people with already compromised immune systems. Proponents of GE claim that GE food is thoroughly tested for safety, but there is a substantial volume of contradictory research that shows high levels of uncertainty. Where we are facing uncertainty about the harms of GE foods, we should not set profit rules, but take the necessary precautions.

5 Environmental impacts

The environmental impacts of genetic engineering are very serious and irreversible. Genetic engineering threatens local biodiversity; can contaminate farmers’ varieties; can increase the use of pesticides; can create invasive species; and can result in new and more virulent viruses.

- Loss of biodiversity
- Contamination of farmers’ varieties or landraces
- Increased pesticide use
- Creation of invasive species
- Harm to wildlife and soil organisms
- Development of new or more harmful viruses

1. These are ailments. Food Research, Syngenta, Bayer and Du Pont and Monsanto own 95% of agricultural biotechnology patents. In other words, 10% of the 500,000 known bacteria generate wealth.
2. Patents on GE seed make the farmers to refrain from purchasing technologies for growing crops containing specific genetic traits than they have in the past. Australian National University, 2001. Canada’s organic farmers have not had the opportunity for growing crops containing GE traits, as it would have been an advantage.
3. Farmers owned the world (excluding small-scale farmers) is South Africa (that buy US seeds have been signs against), contact us: agro.nongovernment, contact us: agro.nongovernment.
4. In practice any GE seeds have no third party, i.e. (many crops and monoculture seeds).
5. Each country determines its own patent laws but through bilateral and international agreements, such as the TRIPS of the WTO, richer countries seek protection of their companies’ activities worldwide.
7. The novel protein found in GE foods can cause unexpected allergic reactions.
8. Monsanto’s GE growth hormone, which is used to increase the size of animals, has been found to increase the frequency of cancer.
9. Most GE organisms contain a gene that confers resistance to antibiotics. The risk is that this gene can be transferred to clinical pathogens, increasing the chances of antibiotic-resistant infections.
10. It is widely acknowledged that farmers do not understand the full benefits of GE crops. Therefore the insertion of a gene that gives the crop resistance to a particular pest or disease is seen as something that will benefit only the farmers.
11. Genetic engineering can involve the transfer of genetic material from one species to another, which can result in new or more harmful viruses.
12. Monsanto’s GE growth hormone, which is used to increase the size of animals, has been found to increase the frequency of cancer.
13. Monsanto’s GE growth hormone, which is used to increase the size of animals, has been found to increase the frequency of cancer.
14. The passing of genetic traits to other species can make species become invasive and there is evidence of this in some areas. 
15. The toxins from GE crops have proved to be harmful to non-target species, such as lacewings, butterflies and birds.
16. In laboratory tests there has been cases where GE crops engineered to be resistant to viruses cause mutation in non-target species.