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**The link between patenting of life forms, Genetic Engineering & Food insecurity**

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*Monsanto, the US developer of Astro-turf, acrilan, NutraSweet and Agent Orange (the defoliant used by the US government to impose a 'scorched earth' policy in Vietnam) has used its high profile £1 million campaign in the UK this summer to convince the British consumer that genetically modified food is safe, and 'green'. There are fears that Monsanto's potential stranglehold on food production in the guise of a massive spending spree acquiring three major seed companies and which bode well for its share prices with an almost 600% rise since 1994 are only just the tip of the iceberg. As it was with Rachel Carson's, 'The Silent Spring', it is only now that the long-term effects of too hasty decisions regarding quick-fix and profit are clear.*

*Monsanto's muscle is renown in the biotechnology field; in just three years it has secured 30 per cent of the US soya crop and 15 per cent of the maize crop. It is one of the largest businesses in the world - worth a massive \$96 billion! Many organizations are actively engaged in what can only be seen as a 'David & Goliath' battle with Monsanto; a partial listing can be found at the end of this Briefing.*

## **The Link Between Patenting of Life Forms, Genetic Engineering & Food Insecurity**

*Wangari Maathai*

The increasingly contentious debate about the impact of patenting of life forms and genetic engineering is extremely important to all humanity: This is especially true for developing countries, rich in biological resources and the traditional practices which have generated this diversity for centuries. It is this resource, called 'green gold', which is now being explored and exploited by global transnational corporations.

Traders have appropriated other people's resources, including human 'resources' and territories, as free goods for centuries, usually by buying-off misinformed, unsuspecting or corrupted nationals. Biotechnology and patenting of life forms is now the new frontier

for conquest, and Africa ought to be wary because a history of colonialism and exploitation is beating itself.

## **Implications of Patenting Life Forms**

The original purpose of patenting and the laws governing the regime were developed to apply to machinery and industrial inventions, Justice now demands that new laws be agreed, through a democratic and open process, to address the new developments in biotechnology. This is especially important when transnational corporations seek to use this technology to justify their claim for monopoly rights on living materials. Corporations are trying to appropriate life through the same rules which have governed the world of business and profits in the past. Industry has in fact already managed to gain private monopoly rights (patents) on some living materials, by distorting the original concept and intention of patenting — as life is obviously not an invention. This distortion has been deliberately created by blurring the meaning of invention so that corporations can obtain private monopolies on mere 'discoveries' of biological materials and their properties, such as umbilical cord blood cells and basmati rice.

This issue is critical because patenting is being applied to seeds which are the basis of societies' food systems. Corporations claim that they can mix and match genetic material through the, new genetic engineering technology, to make better seeds. However, to recuperate their investments, they also claim that they need to obtain a private monopoly fight (patent) on the genetic material which they use. In fact this is to stop others from developing products with the same characteristics, and it effectively blocks the, development of other options from the patented material.

Patenting of living material is also being called 'biopiracy' because corporations get genetic material from the farmers and local communities, who are constantly developing new combinations and characteristics. This old tradition has increased biodiversity, productivity and innovation over the centuries, without using genetic engineering technology or claiming

private ownership of such resources, which are considered a common heritage.

The idea that African farmers should have to buy seeds developed from their own biological materials, from trans-national corporations, because such companies have given themselves the exclusive rights to those seeds, is outrageous. The rights and the capacity of communities to feed themselves would be, completely undermined, if industry managed to assert its self-given rights. In the US, farmers are punished for re-using patented seeds. Industry is trying to force farmers to buy seed each season, which makes them totally dependent on the corporations (1).

Until recently the corporations' ability to enforce their self-given rights in Africa and other developing countries was limited by many factors including distance, the large number of farmers, and lack of legislation in favour of corporate monopoly. It is precisely in order to control the traditional freedom of farmers to develop, use and exchange seeds, that the agrochemical industry has now developed what have been dubbed the 'terminator technology'. This genetically engineered technology ensures that seed injected with the 'suicide gene' does not germinate after harvesting. This means the farmers will have to buy seed each season, and cannot develop their own seed. This the corporations themselves admit through US scientist Melvin Oliver, the primary 'inventor' of the new patent-protecting 'terminator' technique:

*the need was there to come up with a system that allowed you to self-police your technology, other than trying to put laws and legal barriers to farmers saving seeds, and to try and stop foreign interests from stealing the technology (2).*

Under these circumstances, if we thought that slavery and colonialism were gross violations of human rights, we have to wake up to what is awaiting us down the secretive road of biopiracy, patenting of life and genetic engineering. Genocide from hunger, such as we have not yet seen, becomes a haunting possibility.

## Creating Food Insecurity

This lethal use of genetic engineering biotechnology threatens the food security of this and future generations. It destroys the very basis of the livelihood systems which our ancestors have developed for centuries, finely adapting to the diverse ecosystems in which they have evolved. The development and control of farmers' own biodiversity is an inalienable right and the basis upon which food security is achieved, what the transitional corporations and their government allies are advocating undermines, the life style, values and ethics of farming communities. It is indeed a violation of their right to food and to natural justice.

History has many records of crimes against humanity, which were also justified by dominant commercial interests and governments of the day. Despite protests from citizens, social justice for the common good was eroded in favour of private profits. Today, patenting of life forms and the genetic engineering which it stimulates, is being justified on the grounds that it will benefit society, especially the poor, by providing better and more food and medicine. But in fact, by monopolising the 'raw' biological materials, the development of other options is deliberately blocked. Farmers therefore, become totally dependent on the corporations for seeds; market monopolies create pricing structures which make biotech products inaccessible to the poor, in whose name they are promoted.

In fact the poor cannot access these markets. Instead they are persuaded, coerced and sometimes forced, to grow cash crops like coffee, tea, cocoa, french beans and flowers rather than growing for household consumption. They have to do this to generate the cash, to buy the seeds and associated chemical inputs such as fertilisers, pesticides and herbicides from the corporations. In addition they have no control of the pricing of the cash crops nor of the food they have to buy as a result. They are at the mercy of the fluctuations of the commodity markets, and so are their governments which get into debt to buy the food they need to feed their people.

This distorted process has been engineered by the 'free' trade ideologies, so that corporations can generate their ever-growing profits, which

cannot be made if people feed themselves and control their local economies. The process also ensure that international debts, incurred by national governments so that they can buy commodities from international markets, are serviced by local communities which are thereby kept in perpetual debt bondage and poverty.

### **Why Genetic Engineering Will Not Feed the World**

At present the transnational biotechnology industry is aggressively persuading the resisting European consumers that genetic engineering will feed the growing populations in developing countries.

It is now widely accepted that food security for local communities means the capacity to access, develop and exchange seeds and to produce enough food for the households, only selling the surplus to the market. Likewise, national food security means the capacity for a country to produce enough seed and food for its citizens and only the surplus should be sold to the commodity markets abroad. However, for the corporations, food security means growing

numbers, able to buy seed and food from the commodity markets they control, which is what makes it inaccessible to the poor.

Indeed, only northern consumers can afford goods from these markets, which is why the biotech industry has to persuade the resisting Europeans — through coercion if necessary — that genetically engineered food will feed the world. Thus transnational corporations would begin to harvest unjust profits at the expense of local food security.

The resistance must continue to grow, North and South, in solidarity, in order to avoid the old tactic of divide, and rule.

#### **Notes:**

1. 'Monsanto Rounds Up Farmers' Seedling (March 1998, Vol. 15 No. 1), GRAIN.
2. 'The Terminator Technology: new genetic technology aims to prevent farmers from saving seed', RAFI Communique (March-April 1998), RAFI.