

# Monoculture of the Mind

Propagators of genetically modified crops say that new technology is essential to feed the 840 million undernourished people of the world. They believe that biorevolution can be harnessed to serve the food and nutritional needs of the world's poor. But will such potential benefits of genetically engineered food crops ever rid the world of hunger? Modern biotechnology offers enormous opportunities to poor farmers and low-income consumers in developing



countries, they assert.

There is no relationship between the prevalence of hunger and a country's population say others. Millions of poor people the world over cannot afford food everyday. Despite the fact that the world produces enough to meet everyone's food needs. Be it in rich US (with 20 million poor) or in densely populated Bangladesh, or sparsely populated Brazil, millions go to bed without food as they do not have the means to pay. Even though crop yield per acre improved between the 1960s and 1990s, it has barely managed to decrease the world's undernourished to 840 million from 920 million.

Research by Food and Agriculture Organisation (FAO), show that small biodiverse farms can produce much more food than large monoculture farms. Diversity is the best strategy for preventing drought and desertification.

Over the last seven years in Ethiopia, small farmers have been using traditional farming produced food that is needed within this country. Enhanced seeds are selected and exchanged by small farmers. There is a minimal use of chemical fertilisers and no genetically engineered crops. The country has good stocks of food today. Ethiopia shows that diverse, ecologically and culturally adapted food is the key to self-reliance.

Like Ethiopian farmers, Himalayan farmers grow pulses and other cereals in their terraced fields, in Bengal more than 150 plants are used as greens and in Java, small farmers cultivate 600 species in their home gardens. A single home garden in Thailand has more than 230 species of vegetables. Rural families in the Congo eat leaves from more than 50 different species of tree. Home gardens in Indonesia are estimated to provide more than 20 per cent of household income and 40 per cent of domestic food

supplies.

But sadly today farmers everywhere are not getting what they got for the same commodity a decade ago. Farmers growing cereal grains - wheat, oats, corn, earn negative returns, while the companies that make breakfast cereals out of these reap huge profits. In 1998, cereal companies Kellogg's, Quaker Oats and General Mills made profits of 56%, 165% and 222% respectively. While a bushel of corn sold for less than US\$4, a bushel of corn flakes sold for US\$133.

In India, food prices have doubled between 1999 and 2000, and consumption of food grains dropped by 12% in rural areas.

## Patenting 'green gold'

The official or the exclusive right or license to a person or a company, to make or sell or distribute a new product invented or discovered by the person for a certain period of time is called patent.

Genes are 'green gold'. Low-income Southern countries are bestowed an abundance of this treasure by nature. As this belongs to their land, ethically, they should have the rights for the genes of banana, potato, corn, wheat, and so on.

But the rich industrialised countries that lack it want a monopoly. A lot of money is spent on modifying this 'green gold' by companies belonging to these countries. Consequently they argue that value of the genes increase only when genetically modified, so they have every right on its ownership.

The first patent for GMOs was applied for in the US for a genetically modified microorganism designed to gobble up oil spills on the oceans. It was argued that, as it was not a bee or a bird, it could be patented. But environmentalists were concerned about the ethical issue of whether it is right to play God with Nature. In a recent discovery, microorganisms that naturally gobble up oil spills (without being modified) have been found in the Pacific Ocean. Was tampering with life form needed?

Periwinkle flowers have been used as medicine for ages by the indigenous people of Madagascar. A pharmaceutical company patented the gene of this flower and modified it to make medicine for cancer. The company earned profits worth US\$160 million in 1993. But not a penny was shared with the country.

A Nigerean wild berry produces a sweetener that is 2000 times sweeter than sugar. Once modified and produced commercially, will Nigerians get a share of the profit? And environment activists also worry that sugarcane farming may be hit.

Some modified seeds also carry genes that make it redundant for use in the next harvest. The farmers need to buy fresh seeds again for the next sowing. The company that produces the seeds say saving seed is crime, (in other words, depriving them of valuable income). Today, industrialised countries hold 97% of all patents, and global corporations hold 90% of all technology and product patents. So who benefits from patents the transnational companies or the farmers?

**If you are interested in environment education, and want to join G:NET, the network of environment educators, please fill up the form sent with this newsletter and send it to us.**

**A short film "Nagara-Nyrmalya"**

Progressive solid waste management

This film is developed as part of an ongoing campaign of Environment Support Group, a Bangalore based non-profit organisation, to encourage communities to work with solid waste workers in maintaining healthy and clean neighbourhoods, and develop a sustainable approach to solid waste management at community levels.

*Nagara-Nyrmalya* addresses the complex issues involved in solid waste management and the problems faced by *Pourakarmikas* (solid waste workers, also known as *Safai Karmacharis*) in their efforts at maintaining healthy neighbourhoods in Bangalore city.

This entertaining human drama in Kannada with subtitles in English (11 mins) presents the efforts of Santhimmi, a *Pourakarmika*, as she motivates people in her neighbourhood to adopt safe solid waste management techniques.

The film highlights how such small efforts could help vastly improve our approach to solid waste management in cities, big and small.

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[http://www.inep-karnataka.org/proj\\_pourakarmikas.htm](http://www.inep-karnataka.org/proj_pourakarmikas.htm)

**'People use cowdung!^@#?'**

Child delegates attending the International Children's Conference on Environment held in Victoria, Canada produce their own GT.



In May this year, 800 children gathered in Victoria, British Columbia, Canada, for the second International Childrens Conference on Environment, . Besides showcasing their work in schools and communities in their respective countries, the children also had a fun time attending environment workshops and accompanying experts on field trips into the beautiful forests and beaches of Vancouver island.

On a more serious note, the children put their heads together on major challenges facing the planet today. They nominated two members from amongst them to deliver a set of challenges to the heads of states gathering in August in Johanesburg, South Africa, for the World Summit on Sustainable Development (WSSD). Leave it to us! was the slogan of the conference.

The Environment Education Unit of CSE organised a workshop for participants at the conference where they put together a special issue of *Gobar Times*, the beginner's supplement to *Down To Earth*. The issue was released at the closing ceremony. Children from the developed (read fossil fuel) world like Canada, USA and Western Europe were most amused by the name *Gobar Times*. Many eyebrows were raised when they learnt that a majority of Indians use cowdung and other biomass as fuel. It was a unique oppurtunity for children from different parts of the world to learn from each other.

The next ICC is scheduled in 2003 in Conneticut, USA. You can read more at the website: [www.ICCC2002.org](http://www.ICCC2002.org)

**IN THE NEWS**

On June 5, 2002, "World Environment Day", The Gas Authority of India Limited (GAIL) put an advertisement in two leading national dailies, (*The Times of India* and *The Hindu*). The advertisement presented plastics as a solution to large scale deforestation and stated that there is a need to use plastic so that 20 million trees matured over 10 years could be saved from being used, especially for packaging purposes. Environmentalists are angry. They say that GAIL a public sector organisation has no right to squander public money by bringing out such misleading advertisement.

Bharti Chaturvedi of Chintan, an organisation working with ragpickers in Delhi, questions the tactics of the plastic industry and now GAIL in limiting the plastic argument to polybags. Plastics is not limited to only packaging, She says. It has not only sought to replace forest products like paper (often from wood pulp), but also several other products which have provided for a rich crafts base like earthen surahis, coir mats, coir ropes and a whole lot of other products.

Sudarshan Rodriguez of Reef Watch Marine Conservation says, "Plastic entanglements are killing up to 40,000

**Advertisement encouraging plastic use invites criticism**

seals a year resulting to a four to six per cent drop in seal population. Animals like sea turtles and sea birds drown or strangle from getting tangled and even die from eating discarded plastics and other garbage. Balloons have been the cause of death of animals like sperm whales.

Dr. Asad Rahmani, Director Bombay Natural History Society questions GAIL asks how does GAIL intend to dispose off plastics without letting out poisonous, dioxin. "It is well known" says Dr Rahamani, "that trees are specially being farmed to feed the paper mills, plus bamboo too is a renewable source for paper production. While deforestation is reversible, the damage caused by plastic is permanent. It takes thousands of years for plastic to degrade, till then the damage continues."

Rodriguez explains that worldwide disposal of plastics is problem. There is no safe method to destroy the material. Incineration or burning, propogated by the plastic industry produces dioxins. Dioxins are one of the most lethal synthetic chemicals known today. They are carcinogenic. Dioxins dissolve easily in fats and as a result can build up in the



The ad in question. Missing the wood for the trees?

fatty tissues of animals or humans. Globally more than 650,000 plastic bottles are dumped into the oceans each day. It is estimated that the total input of marine litter (mostly plastics) into the oceans, worldwide, is approximately 6.4 million tonnes a year.

On the contrary, Sandeep Gupta a chemical engineering from IIT-Kharagpur working at present in a MNC says "Use of plastic or polymers in daily life like fittings, furniture and containers, directly influences consumption of tree based products like pulp/paper". He

asserts,"The main culprit is the plastic bag and governments should ban it. America today is greener than before, although its per capita plastic usage is fifteen times more than ours! The reason is that it has made use of polymers responsibly."

What GAIL and others propogating use of plastics forget, counters Chaturvedi that the plastic bag and restricting the protests to anit-polybag campaigns are basically an eyewash. Plastic waste disposal is a problem with no solutions.

**WRITE IN**

We are adopting two corporation gardens where we will be cultivating rare variety of ferns of western ghat. We sensitise school children towards environmental issues and involve them in activities. I have received one issue of G:NET. I need your cooperation.  
 Mrs Lalan Prabhu <lalanpr@rediffmail.com>  
 Belgaum

I wanted to write to you, after what I read in the newspaper Times Of India, on June 5, which is World Environment Day. Gail [Gas Authority of India Limited] were bombarding the papers saying that use of plastics should not be stopped, and that plastics helped save trees, and so were good for the environment. Do you agree with them or not? Because I don't think so, but I don't

know much about it, so I thought I'd ask you your opinion. So, did you read the paper on that day?  
 Shruti Sareen  
 Varanasi  
 (Ed: Please refer to news item above)

I have recently learned that the Timarpur incienrator in Delhi, which did not work even a day, is being sold as depreciated machinery and as scrap. The tender is out as well. This is a celebration and a warning. Celebration because hadit ever worked, or attempts to revive it happened,it would have been highly toxic for us, our wildlife and birds, our bodies and everything else. Warning: because now the highly embarrassing symbol of the failure of burn technologies will be removed. and we need to not let anyone forget this disaster. Also a moment of reflection how can

citizens resist such devises thrust upon them by a stone-deaf decison making apparatus? Whatever, it is a good example of crap to scrap. We should celebrate at the venue when it is dismantled and hold some kind of an event. at least toast to the dismembering of a toxic dragon.  
 Bharati Chaturvedi  
 Chintan, New Delhi

We have formed a group in our local area and want to promote certain issues like Recycle waste, eliminate polybags and plant trees. We would need tons of help and support of your team.  
 Monica Bajaj  
 New Delhi

We are working with some Tibetan communities in HP, and partnering lwith NGOs in Delhi. We are funding Non formal

education centres in Yamuna Pushta, Raj Ghat and Mall Road bastis, in Delhi. Each class has about 50 children. We also run a computer centre in the Yamuna Pushta centre which has online facilities. EE is taught in these classes. I believe the approach you have developed would be not only interesting for the kids, it would also give teachers better tools.  
 Glenn Fawcett  
 White Lotus Project, New Delhi

Rejoinder:  
 Last GNET (No.4 Conservation) carried a letter to the P.M. in EE Watch.Please do not forward the letter to Kalpvriksh as requested. Instead send your letters to: EEU, CSE, 41 Tughlakabad Institutional Area, New Delhi-110062 .E mail: [gnet@cseindia.org](mailto:gnet@cseindia.org)  
**Editor's Note: Please treat this as an interactive forum. You are encouraged to send responses to the letters carried here.**