

“Why I believe that



Dr. Vandana Shiva is the founder of the independent Research Foundation for Science, Technology and Ecology in Dehra Dun, which works closely with local communities to address ecological and social issues. She is actively concerned with biopiracy and intellectual property issues and is the founder of a national movement to protect the diversity of living resources, particularly native seeds. She is a visiting professor and lecturer on these subjects at universities in Europe and North America and advises governments in India and abroad.

sending GMOs to starving people is ‘inhuman aid’

The debate over distribution of genetically modified grain as food aid rages more strongly than ever. Bio-diversity activist [Vandana Shiva](#) argues that food aid must be “sustainable”

FOOD AID IS INCREASINGLY being used as a weapon to create markets for the biotechnology industry and genetically engineered foods. The most dramatic example of this inhuman form of aid was the attempt by USAID to supply GM maize as food aid to the famine stricken countries of Southern Africa including Zambia, Zimbabwe, Lesotho, Mozambique and Malawi. Malawi accepted the GM maize because under pressure from the World Bank it had been forced to sell its maize reserves in order to repay commercial loans. However, Zambia, Zimbabwe and Mozambique, which had played a significant role in negotiating the Biosafety Protocol, the regulatory system for GMOs under the United Nations Convention

on Biodiversity, refused to accept GM maize in the form of food aid.

Zambian President Levy Mwanawasa said his people would rather die than eat toxic food. The President's statement followed a national consultative meeting in Lusaka on 12 August 2002 at which farmers, women's groups, church leaders, traditional leaders, members of parliament, opposition politicians and government jointly recommended that Zambia should not accept GM food aid.

The Zambian president condemned the Food and Agricultural Organisation of the United Nations, the World Health Organisation and the World Food Programme for being irre-

sponsible in supporting the US. “We may be poor and experiencing food shortages”, he said, “but we are not ready to expose people to ill-defined risks”. He also pleaded that Zambians should not be used as guinea-pigs.

Drought and famine

The combination of climate change and the World Bank’s structural adjustment programmes have turned Southern Africa into a victim of drought and famine with the result that countries have been obliged to dismantle their food security systems.

More than 300,000 people now face starvation and the policy of sending them food aid containing GMOs is now a major issue. In the closing plenary of the 2002

Johannesburg Earth Summit, for instance, US Secretary of State Colin Powell was heckled by both NGOs and governments when he insisted that African countries import GM food from the US. Hundreds of African farmers and government representatives also condemned the US pressure to distribute GM contaminated food aid. Instead, they proposed small scale, indigenous solutions based on farmers rights to land, water and seed. A forthright statement issued by representatives of civil society in 45 African countries made the following points in support of the governments and people of Zambia and Zimbabwe:

- We refuse to be used as the dumping ground for contaminated food, rejected by the northern countries; and we are enraged by the emotional blackmail of vulnerable people in need, being used in this way;

More than 300,000 people now face starvation, and the policy of sending them food aid containing GMOs is a major issue

India's experience with Bt. cotton demonstrates that the GM option is a threat to food security since it creates ecological and economic vulnerability

- The starvation period is expected to begin early in 2003, so that there is enough time to source uncontaminated food;
- There is enough food in the rest of Africa (already offered by Tanzania and Uganda) to provide food for the drought areas;
- We want to strengthen solidarity and self-reliance in Africa, in the face of this next wave of colonization in which corporations are trying to control our agricultural systems by manipulating the supply of seed;

- As a mark of responsibility to future generations we will stand together in preventing our continent from being contaminated by genetically engineered crops.

Food aid is also being used to create markets for the biotech industry in non-African countries:

- After the devastating cyclone in India which killed 30,000 people, a corn-soya blend was distributed as food aid despite the fact that the local people eat rice. On analysis by our organisation, the Research Foundation for Science, Technology and Ecology, the mixture was found to be genetically engineered, in total violation of GM laws in India;
- The World Food Programme has been distributing transgenic food for seven years without informing recipient countries and often in violation of the national laws of these countries;
- On 10 June 2002, the Bolivian Forum on



A World Food Programme (WFP) warehouse near Amman, Jordan, where the UN agency stockpiled 27,000 tonnes of rice in advance of the Iraq war. But the WFP along with the FAO and WHO, has been criticised over GM maize destined as food aid to famine areas in Southern Africa.

Environment and Development found that a sample of USAID food aid tested positive for the presence of Starlink maize, a GM corn not approved for human consumption due to health concerns over possible allergic effects;

- Aid to Columbia was found to be 90% transgenic.

When countries facing food scarcity want non-GM food, their views must be respected

Three major issues arise when food aid is used to market biotech products. Firstly, hunger and food scarcity increase as a result of the destruction of ecological security and food security. In our opinion the best solution to food insecurity is to strengthen the ecological resilience of farming systems through biodiversity and sustainable agriculture and the economic strength of local communities through food sovereignty.

Secondly, when countries facing food scarcity want non-GM food, their views must be respected. Southern Africa needed a million tonnes of food grain to relieve its immediate food crisis. 1.16m tonnes of non-GM maize is available in Kenya, Tanzania, Uganda and South Africa. More than double this amount is available on the world market. The EU announced that it would provide Southern Africa with €30m to buy GM-free food and India has 65m tonnes of non-GM food stockpiled which can be provided for less than US\$ 0.10 a kilo. There are many alternatives to GM food. We believe that coercion in periods of emergency is inhuman action, not humanitarian aid.

Food security

Finally, India's experience with Bt. cotton demonstrates that the GM option is a threat to food security since it creates ecological and economic vulnerability. On 26 March 2002 the Genetic Engineering Approval Committee (GEAC) of the Ministry of Environment and Forests (MoEF), Government of India, gave conditional clearance for commercial planting of genetically engineered *Bacillus thuringiensis* (Bt.) cotton to Monsanto and Mahyco.

Commercial clearance was granted on the grounds that the crop had been fully tested in Indian conditions, that it does not require pesticide

sprays and it gives higher yield and farmers have higher incomes. However, all the claims on the basis of which the clearance was granted have

since been proven false by the total failure of Bt. cotton in the states where it was cleared for planting. A field survey by the Research Foundation for Science, Technology and Ecology last year found the following results:

Bt. Cotton is not pest resistant

The Bt. cotton was devastated by pest attacks such as bollworm, aphids and thrips and required more frequent spraying than non-Bt. cotton. In some areas the Bt. cotton was also attacked by wilt and root rot which do not affect other varieties.

Promised higher yields did not occur

Bt. cotton was sold with the claim that it would give 15 quintals of yield per acre. Average yields of Bt. cotton were in fact only 1.2 quintals per acre and none were higher than four quintals per acre, which is well below the expected yield in other cotton hybrids. The Bt. cotton plant yielded 60 bolls per plant while other varieties yielded up to 200-250 bolls on each plant.

Farmers' incomes were not higher

Some growers received very poor yields from their Bt cotton, despite spending thousands of rupees on its cultivation. The poor return has made farmers angry with the companies who have sold them Bt. cotton. Many of them did not earn enough to cover the costs of seed and labour, which amounted to 3500-4000 rupees (\$76-\$86) per acre.

Both Monsanto-Mahyco and GEAC, predicted that a Bt. cotton grower would get an average increased income of 10,000 rupees (\$276) per acre. In fact, the

Bt. cotton failure has cost farmers a total loss of 1,128m rupees (\$24m) in one cropping season.

It is time for citizens worldwide to insist that their public taxes and public money be used for enhancing public good, not for subsidising global corporations and private profits

Major mechanism

Food aid has become a major mechanism for undermining food security which can be assured only by ecological and sustainable agriculture. It is usually assumed that food aid is a simple matter of countries donating food. However, food

aid also creates a market for northern agribusiness.

The World Food Programme and bilateral aid agencies use public money to buy food in international markets and provide it to countries facing food emergencies. Usually food aid undermines domestic markets, brings down prices, and thus destroys local food security. Sometimes, as in the case of the recent drought and famine in Southern Africa, the

US has tried to use food aid to blackmail countries to accept GM food.

Aid needs to be oriented to build long-term food security through sustainable agriculture

Aid needs to be oriented to build long-term food security through sustainable agriculture.

Emergency food aid needs to be based on procurement as close to the crisis area as possible and in ways that do not undermine domestic food security by destroying domestic markets and food production. People's cultures and choices need to be respected when emergency food aid is distributed.

In conclusion, aid can either be *support* for sustainable agriculture and food security, or a *subsidy* for dumping non-sustainably produced inappropriate foods on victims of poverty and disasters. It is time for citizens worldwide to insist that their public taxes and public money be used for enhancing public good, not for subsidising global corporations and private profits.

Information sources on GMOs

Europe's strategy for life sciences and biotechnology

At the Stockholm European Council in March 2001, the European Commission said it intends to formulate a strategy for life sciences and biotechnology to 2010, and will also decide how to deal with the associated ethical issues. In September of the same year, the Commission held a public consultation attended by representatives of members of governments, public authorities, the European Group on Ethics, industry and professional associations, academics and interested individuals. This led on 5 March 2003, to the adoption by the Commission of the first report on the progress of the strategy for life sciences and biotechnology. It contains information on achievements, future actions and orientations, and recommendations.

http://europa.eu.int/comm/biotechnology/pdf/com2003-96_en.pdf

Greenpeace

The Greenpeace website on genetic engineering gives some information on genetically engineered food, intellectual property rights, and the environment. There are links to documents such as the Biosafety Protocol, the international environmental rules which were adopted in Montreal, Canada, in January 2000.

<http://ge.greenpeace.org/>

The UK Food Group

The UK Food Group is the leading UK network for non-governmental organisations (NGOs) working on global food and agriculture issues. The group has released *Hungry For Power*, a publication which spotlights the activities of Nestlé, Cargill, Monsanto, Chiquita, Zeneca and British American Tobacco – all of which are charged with undermining global food security.

<http://www.ukfg.org.uk/>

UK Agricultural Biodiversity Coalition

The UK Agricultural Biodiversity Coalition website gives a comprehensive coverage of all issues concerning the sustainable and equitable use, conservation, intellectual property, genetic engineering and governance of agricultural biodiversity.

<http://www.ukabc.org/>

Genetic Resources Action International

Genetic Resources Action International (GRAIN) is an international NGO which promotes the sustainable management and use of agricultural biodiversity based on people's control over genetic resources and local knowledge.

<http://www.grain.org>

ActionAid report

In May 2003, ActionAid released a new report "*GM crops: going against the grain*". The report claims that, at best, GM is irrelevant to poor farmers, and at worst it is a huge threat.

<http://www.actionaid.org/resources/pdfs/gatg.pdf>

The Commission on Genetic Resources for Food and Agriculture

The Commission on Genetic Resources for Food and Agriculture (CGRFA) was originally established in 1983 by the FAO Conference to deal with issues related to plant genetic resources. The CGRFA reviews and advises FAO on policy, programmes and activities related to the conservation, sustainable use and equitable sharing of benefits derived from the use of genetic resources relevant to food and agriculture. The website provides information on its activities and on various international documents including the International Undertaking, the first comprehensive international agreement dealing with plant genetic resources for food and agriculture.

<http://www.fao.org/WAICENT/FAOINFO/AGRICULT/cgrfa/default.htm>

forum

OPEN WHEN AUTHORS FACE THE READERS

"The GMO debate deflects attention from global hunger"



VANDANA SHIVA
"More than 300,000 people now face starvation, and the policy of sending them food aid containing GMOs is a major issue"



JAMES T. MORRIS
"Ironically, those groups most vociferously opposed to genetically modified foods did not step forward to offer an alternative or help us find cash resources to buy non-genetically modified foods"

James T. Morris, Executive Director of the United Nations World Food Programme (WFP), disagrees strongly with Vandana Shiva's article, "Why I believe sending GMOs to starving people is inhuman aid" in the last issue of HAR. Vandana Shiva argued that starving people had been used as human guinea pigs without their knowledge and that food aid is being used to create markets for the biotech industry. In his article, James T. Morris says that WFP policy on GMO foods follows international scientific guidelines, and that the wishes of recipient countries are always respected. He explains how the 'tabloid' frenzy of anti-GMO groups has shifted attention from the real issue: global hunger.

Like many people and organisations, the WFP has been challenged by the questions raised by genetically modified foods,

notably the debate on whether GM foods are a valuable tool in the fight against hunger or a threat to health and the environment. Our response is clear: the WFP's mission is to relieve the suffering of the hungry and to help them feed themselves. Under no circumstances would we be prepared to distribute food which might harm the recipients.

The problem is a scientific one, and as the World Food Programme is an operational agency and not a technical one, we have naturally taken advice from the scientific world. The response was resounding: none of the scientific studies of food containing genetically modified organisms has come up with any evidence that these foods might be harmful to consumers' health.

The agencies qualified to make technical judgements on food safety issues are the Food and Agricultural Organisation

(FAO) and the World Health Organisation (WHO), the co-sponsors of the Codex Alimentarius Commission, whose highest priority is to protect the health of consumers and ensure fair practices in the food trade. In 2002, a joint UN statement on the use of GM foods as food aid in Southern Africa stated categorically: "The FAO, WHO and WFP confirm that they are not aware of any scientifically documented cases in which the consumption of these foods has had negative effects on human health." Subsequently, in June 2003, the Codex Alimentarius adopted a "Guideline for the Conduct of Food Safety Assessment of Foods Derived from Recombinant-DNA Plants" which will standardise the procedures for judging the safety of genetically modified foods in the Codex member states.

No evidence

The European Commission has also decided that there is no reason to believe that GM food is inherently unsafe. EU Health and Consumer Protection Commissioner, David Byrne, has said on a number of occasions that EU scientists have found the GM corn varieties they have examined, to be "as safe as their conventional counterparts." Commissioner Byrne has also said that none of the many reputable studies conducted to date, has found any peer-reviewed evidence that GM food is inherently unsafe to human health. The European Commission has cited 81 separate studies that support this view.

Foods with a genetically modified content are now grown and consumed in Argentina, Australia, Canada, China, Europe, South Africa and the United States. The number of countries growing these crops and the number of hectares

planted with them has increased steadily every year since they were first commercialised in the 1990s, and by 12% in 2002 alone. In each and every one of these countries, foods derived from biotechnology have successfully passed the regulatory hurdles required for such new products. The food WFP's beneficiaries eat has been certified fit for human consumption and is no different from the food that families eat daily in cities like Buenos Aires, Johannesburg and New York. Food safety aside, no country has been pressured to accept donations of food containing genetically modified foods. Just as with any other shipment of food, the receiving country has the right to choose to accept or reject any consignment, whether or not it contains GMOs. WFP has, and will continue to, respect such requests.

Increased costs

In Southern Africa, Zambia was the only country that decided not to accept imports of any kind of genetically modified food. WFP complied with this request, and obtained non-GMO food aid from donors. WFP also attempts to comply with requests to mill genetically modified grain, to prevent it from being planted in countries that have environmental or trade concerns. However, the additional cost and time this involves inevitably affects the hungry. In Southern Africa, milling requirements increased the cost of delivering food by approximately \$2.5m. The same cash could have been spent on other emergency needs, such as additional food, fortifying food with micronutrients or the aid projects of NGOs and other UN agencies such as UNICEF, the World Health Organisation and the FAO.

In her article in the last edition of *Humanitarian Affairs Review*, Vandana Shiva called for emergency food aid to be

procured as close to the crisis as possible. The WFP follows this policy whenever it can - as long as the net result is not an even worse situation for people in need. In Southern Africa, for instance, WFP spent almost all of its cash donations on purchasing food in the region. However, we were aware that large-scale purchases from local and regional producers might drive maize prices so high, that even people who were not originally in need of food aid, could not afford to buy it on the market. That would have been a strange way of promoting food security indeed.

Dumping mechanism?

Is food aid a mechanism for dumping unwanted commodities? Not in today's agricultural economy. Global food aid was just 9.6m metric tons in 2002, less than 1% of the 1.5bn tons of grains consumed globally, and a mere 4% of the global trade in cereals. The food aid market is hardly rich pickings for a \$534bn a year business. Were genetically modified foods, which could not be sold, "dumped" as food aid in Southern Africa? Hardly.

The price of maize world-wide was actually *rising* during the food crisis – so there was no need for exporters to dump unwanted grain that they could have sold profitably. Since commodities are generally not segregated according to whether or not they contain GMOs, it would be quite difficult to 'dump' them separately in any event.

The Food and Agriculture Organisation estimates that 800m people in developing countries are chronically malnourished. Hunger still claims more lives each day than AIDS, tuberculosis and malaria combined. The WFP, with the highest level of contributions in the entire UN system (\$2.6bn in 2003), reaches just one in ten of

the world's hungry on average each year. Clearly, there are too few resources available to reach our goal of helping to halve the number of hungry people worldwide by 2015.

Falling volume

The WFP's duty to the hungry poor is to mobilise as many resources as possible to relieve hunger and poverty. That's increasingly difficult when the volume of food aid has dropped dramatically from 15m tons in 1999 to just 9.6m tons in 2002, and much of that food is directed to politically high-profile crises such as Afghanistan and Iraq. In southern Africa last year, we found that our calls to other donors to donate cash or in-kind food were unable to raise sufficient resources to fill the gap. Ironically, those groups most vociferously opposed to genetically modified foods did not step forward to offer an alternative or help us find cash resources to buy non-genetically modified foods.

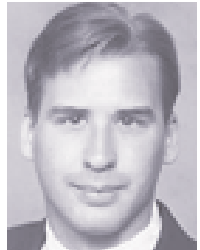
Sadly, the debate over genetically modified organisms has derailed a far more grave debate over why, in 2003, the number one risk to health worldwide is still hunger. It has been hijacked by individuals and groups approaching the issue with tabloid frenzy, advancing political and ideological arguments which ignore the basic scientific facts. Food scientists and biotechnologists have long since determined that the genetically modified foods available on the market today are perfectly safe for human consumption. In fact, they have been eaten safely on literally billions of occasions. Those who continue to pursue the debate would do much better to turn their considerable polemic talents to more positive pursuits like a campaign to end the age-old problem of starvation. Ending hunger is the challenge that we at the United Nations World Food Programme struggle with every day.

"Poor farmers need the benefits of GM crops"



**CHANNAPATNA S. PRAKASH
AND GREGORY CONGO**

"GM technology has already increased crop yields and food production, and reduced the use of synthetic chemical pesticides in both industrialised and less developed countries alike"



Channapatna S. Prakash and Gregory Conko, respectively president and vice-president of AgBioWorld Foundation based in Auburn, Alabama also take issue with Vandana Shiva's article, "Why I Believe that Sending GMOs to Starving People is inhuman aid", in the last issue of HAR. Prakash and Conko claim that it is irresponsible to deprive developing countries of the benefits of GM technology.

Vandana Shiva argues that transgenic – also known as bio-engineered or genetically modified (GM) – crops are unsafe for people and the environment and they offer no benefits to poor farmers in less developed countries. She concludes that the distribution of GM foods to starving people is therefore "inhuman".

Unfortunately, Dr. Shiva is wrong on all three points. The GM food crops now on the market have been shown to be safe for the environment and human consumption, and practical experience in several less developed countries shows that engineered crops have

already delivered benefits to poor farmers.

Risk of starvation

In 2002, while more than 14m people in six drought-stricken southern African countries faced the risk of starvation, efforts by the UN's World Food Programme were stifled by the global GM food controversy. Food aid, containing kernels of transgenic maize from the US, was initially rejected by all six governments, even though the same maize is consumed by hundreds of millions in the US and millions more around the world, and has been distributed by the WFP throughout Africa since 1996. Five of those governments later accepted the grain on condition that it be milled to prevent planting. Only Zambia continued to refuse.

Shiva proudly notes that Zambian President, Levy Mwanawasa, said his people would rather die than eat bio-engineered food. The starving Zambian people felt differently, though. News reports described scenes of hungry Zambians

rioting and overpowering armed guards to release tens of thousands of tons of the transgenic maize locked away in warehouses by the government.

Distributing food aid that posed a genuine threat to human health would indeed have been unethical. However, the crops in question had been found safe by scientific bodies and numerous regulatory authorities all around the world. The UK's Royal Society, the National Academies of Science from Brazil, China, India, Mexico and the US and the Third World Academy of Science have all embraced bioengineering. In a report published in 2000, the scientists declared: "It is critical that the potential benefits of GM technology become available to developing countries."

Today, some 200m people in sub-Saharan Africa go hungry every day and, despite commitments by industrialised countries to increase international aid, Africa will still have over 180m undernourished citizens in 2030, according to a report published by the UN Millennium Task Force.

Increasingly adopted

GM technology has already increased crop yields and food production, and reduced the use of synthetic chemical pesticides in both industrialised and less developed countries alike. Critics, like Shiva, dismiss such claims as nothing more than corporate public relations puffery. However, while it is true that

most commercially available bio-engineered plants were designed for farmers in the industrialised world, the increasing adoption of transgenic varieties by underdeveloped countries over the past few years demonstrates their broader applicability.

Crops enhanced through modern biotechnology are now grown on nearly 68m hectares (168m acres) in 18 countries, including Argentina, Australia, Brazil, Canada, China, India, Mexico, the Philippines, South Africa, and the United States. Nearly one-quarter of that acreage is farmed by over 7m poor farmers, in less developed countries because they see many of the same benefits as farmers in industrialised nations.

As much as 40% of crop productivity in Africa and Asia and about 20% in the industrialised countries of North America and Europe is lost to pests

and diseases, despite the use of large amounts of insecticides, herbicides, and other agricultural chemicals. Clearly, pest-protected transgenic crops can be useful around the globe.

Total failure

Shiva claims that the first growing season of transgenic cotton in 2003 was a "total failure" in India, but a study conducted by the University of Agriculture in Dharwad contradicts this view. The study concluded that the transgenic cotton

reduced pesticide spraying by one half or more, delivering a 30-40% increase in profits. Another survey also confirmed these findings and showed that Indian Bt cotton helped increase yields by 30% when compared with conventional cotton fields.

It is true that, due to drought conditions, some Indian cotton farmers saw no increased yield from the more expensive transgenic varieties last year. However, most farmers are eager for more. A recent report showed that the farm area under Bt cotton tripled in just one year from 72,682 hectares to 216,000 hectares this year, and many growers in the northern states are now pushing for government permission so they too can grow GM varieties. Yet, Shiva continues to perpetuate the myth that this crop has been a failure.

Saved lives

There is even evidence that transgenic varieties have literally saved human lives. Some 400 to 500 Chinese cotton farmers die every year from acute pesticide poisoning because, until recently, the only alternative was risking near total crop loss from voracious insects. A study conducted by researchers at Rutgers University in the US and the Chinese Academy of Sciences found that adoption of transgenic cotton varieties in China has lowered the amount of pesticides used by more than 75% and reduced the number of pesticide poisonings by an equivalent amount. Another study, by economists at the University of

Reading in the UK, found that South African cotton farmers have seen similar benefits.

The productivity gains generated by transgenic crops provide yet another important benefit: They could save millions of acres of sensitive wildlife habitat from being converted into farmland. Increasing agricultural productivity is an essential environmental goal, and one that would be much easier in a world where bioengineering technology is in widespread use.

“There is evidence that transgenic varieties have literally saved human lives”

Create markets

Ultimately, Shiva argues that food aid is being used to create markets for the biotechnology industry and transgenic foods. But, as Andrew Apel of the *AgBiotech Reporter* notes, "people so desperately poor that they cannot afford the most basic necessity of life – food – can scarcely be thought of as a market for much of anything at all." Perhaps it is those who would keep bioengineering technology from those so eager to embrace it who are being dishonest?

Shiva concludes by arguing that we all have a responsibility to future generations to prevent our environment from being "contaminated" by genetically engineered crops. We do indeed have a responsibility to future generations, but that responsibility is poorly served by needlessly preserving low-yield agricultural practices that have so obviously failed resource poor farmers – especially when a safe and effective technology is available to help them.