

MONSANTO: BEHIND THE SCENES

A corporate profile

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This profile is meant to be a useful action tool for grassroots activists. It will hopefully help people target Monsanto, whether in a new campaign or an existing one. It highlights Monsanto's vulnerabilities and key strategies. It aims to focus attention on the resistance against Monsanto and its strategic responses, such as:

- Ongoing **grassroots resistance** against Monsanto for aggressively pushing for approval of its GE seeds in countries where farmers do not want them. Despite opposition from farmer and/or peasant-based groups in countries like Brazil, the Philippines, India and Canada, Monsanto continues to get approval to conduct field trials and for commercial release. Solidarity with farmers can help in the fight against Monsanto.
- There is presently a high profile, cross-sectoral fight being waged against the approval of GE wheat. Monsanto has submitted its **Roundup Ready wheat** for approval in Canada and the U.S., and is depending on the product to boost its sales over the next several years. Officials from many countries that import wheat have said that any GE or GE contaminated wheat will be refused. Stopping approval of GE wheat would be a major hit to the future of Monsanto's product pipeline.
- Concerns about food safety and environmental health continue to encourage the European Union's (EU) *de facto* moratorium on approvals of new GE seeds and imports. Meanwhile, major GE crop producers Canada, U.S., and Argentina have launched a **challenge at the WTO** (World Trade Organization) against the moratorium. Monsanto was part of farm lobby groups that pressured the Bush Administration to take action at the WTO against the EU.

monsanto at a glance

Monsanto is the leading genetically engineered (GE) seeds corporation in the world. It owns numerous seed and plant biotechnology companies, which it acquired mainly between 1996 and 1998 at a total cost of more than \$8 billion. Its first GE seeds were sold commercially in 1996 in the U.S. It has operations in more than 50 countries. While its biggest customer base is the U.S., it is relentless in seeking approval for its products in the global South, despite massive protests from farmers and communities in general.

Monsanto, and the GE seeds and foods industry in general, face a number of barriers. People are concerned about the corporate takeover of their food systems, as well as the environmental and health risks of GE crops and foods. Export farmers are concerned about losing customers as import countries are restricting their acceptance of GE products. Farmers are also concerned about contamination of their non-GE fields with pollen from fields planted with GE seeds. Farmers in the global South are also suffering due to contamination from GE crops, as well as continue to struggle against the replacement of local, affordable varieties with expensive, corporate products.

Monsanto is no stranger to controversy given its past as a polluter. Monsanto has a strong history in chemical contamination of peoples' environments, from its production of Agent Orange - used in the Vietnam war - to its dumping of PCBs directly into soils and waterways in the U.S. Today it continues to pollute, but in other ways. Increasingly its GE crops are contaminating environments and non-GE crops, despite the opposition of people across the globe.

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MONSANTO OVERVIEW

Monsanto's vulnerabilities

“Ag is a Drag”: “Ag is a Drag” is still the warning from investors about agricultural biotechnology. Monsanto is being warned to diversify away from agricultural biotech. Popular resistance has been strong enough that governments in major import markets have restricted the trade of GE food products. Certain governments have offered premiums for non-GE products. The risk is enhanced for Monsanto since being left on its own after the spin-off from Pharmacia in 2002. Monsanto no longer has this more profitable parent pharmaceutical corporation to depend on.

Dropped sales in 2002: Over the past two years Monsanto's stock price has fallen by over 50 percent. In 2002, Monsanto lost \$1.75 billion in the first nine months of the year, compared with a profit of \$399 million for the same period of 2001. There are speculations that Chief Executive Officer (CEO) Hendrik Verfaillie was forced to resign by the Monsanto Board of Directors because business was so bad. Monsanto's annual report states that the drop in sales were caused by: expiration of the patent for Monsanto's biggest selling product – Roundup herbicide; drought in the mid-west, which decreased demands for Roundup; and political unrest and economic hardship in Brazil and Argentina, two of Monsanto's biggest markets in South America.

Dropping European operations: In October 2003, Monsanto announced plans to sell off its European cereal seed business. This includes selling cereal development stations in Cambridge, England and in France, Germany, and the Czech Republic, as well as its subsidiary Plant Breeding International (located in Cambridge), which develops crops genetically engineered to produce versions of human antibodies. Monsanto also plans to cut 7% to 9% of its global workforce, that's 1 out of 11 employees, by the end of fiscal year 2004. Monsanto claims these cut backs have nothing to do with the popular resistance against GE crops and foods in Europe. It says it wants to focus more on projects that will “best capitalize on its market and technological strengths.”¹

No to GE wheat: There is presently a high profile, cross-sectoral fight being waged against the approval of GE Wheat. Monsanto is hoping to make up for lost sales with the commercialization of Roundup Ready wheat, which has not yet been approved. Stopping approval of genetically engineered (GE) Wheat in North America would be a major hit to the future of Monsanto's product pipeline. Many of the 70 countries that import Canadian wheat have stated they will refuse RR wheat or any wheat that has been contaminated by GE wheat.

Bans and moratoriums: Many countries that import crops from the U.S., Canada, Argentina and China (the largest growers of GE crops worldwide) have rejected or restricted the import of GE food products. This includes many countries in the global South, which have strongly opposed GE crops due to concerns about environmental contamination, permanent loss of traditional varieties with GE varieties and patents held on traditional crops. U.S., Canada and Argentina are challenging the EU moratorium on new approvals of GE crops and imports at the World Trade Organization.

Resistance: Resistance against Monsanto continues to be strong across the globe. Farmers and non-farmers have been actively opposing the push of industrial agriculture, and directly targeting Monsanto. These resistance movements have had significant impacts on Monsanto's

operations. Generally, people are concerned about food safety, environmental health, farmers' rights and the corporate takeover of food systems.

Bad public relations: Monsanto put itself into the public spotlight through an aggressive public relations campaign in Europe in 1997/98 that backfired. Monsanto continues to get bad press due to its general behaviour, including various lawsuits against farmers, chemical and genetic contaminations and overall aggressive push of GE seeds.

Monsanto's key strategies

#1 in GE seeds: Monsanto continues to be the global leader in the development and commercialization of GE seeds. In 2002, 91% of all area planted with GE crops worldwide were planted with Monsanto's seeds. Its biggest seller continues to be its herbicide Roundup, and the most planted GE seeds worldwide are Monsanto's Roundup Ready (RR) soybeans, corn, canola, and cotton. Monsanto's biggest markets for its GE seeds are in the Americas - U.S. is the biggest producer of GE crops worldwide, Argentina is the second largest producer and Canada is the third.

Current customer base: In the short term, 2003/04, Monsanto is looking to expand its business by selling more to its current customers, such as those in the U.S., Canada and Argentina, as well as South Africa, Australia, China, Mexico, Bulgaria, Romania, Uruguay, Spain, Indonesia and Germany. It hopes to get more crops with stacked or multiple traits on the market, such as herbicide and pest resistant soybeans, as well as its second-generation Bollgard (*Bt*, insect resistant) crops.

New international markets: In the long term Monsanto plans to strengthen recently opened markets (like India, Indonesia and the Philippines) and access new markets for its GE crops. Current markets are saturated or limited in other ways. For instance, 80% of soy crops in U.S. are already planted with GE seeds, and 90% in Argentina. Argentina bans any GE corn that is not already approved in the EU. In Canada, non-GE soybeans attract a premium, while 70% of canola in Canada is already genetically engineered and the rest is already effectively GE contaminated.

Trapping farmers: Farmers in the U.S. and Canada who grow Monsanto's GE seeds are forced to pay licensing fees, as well as sign technology user agreements that block them from saving seed for use the following year and make it mandatory to buy Monsanto's chemicals. If farmers are found breaking these contracts or growing Monsanto's seeds without permission, they are penalized. By the end of 1999, Monsanto had initiated over 475 lawsuits for alleged patent infringement and violations of the technology user agreements. U.S. farmer Homan McFarling was fined \$780,00 for growing Roundup Ready (RR) soybeans without paying the license fee and Kem Ralph of Tennessee was sentenced to eight months in prison after Monsanto took him to court for saving GE cotton and soybean seed. Monsanto took Canadian farmer Percy Schmeiser to court when he was found to have RR canola in his fields without having bought the corporation's seed.

Public relations schemes: Monsanto continues to develop savvy public relations to get its earnings up over the next few years. Monsanto's main PR messages are that GE products will provide economic benefits to farmers, feed hungry people around the world, provide more nutritional foods, lead to less pesticide use and enhance soil conservation. Between 1998 and 2002, Monsanto is reported to have spent \$436 million on advertising.

Public subsidies: Monsanto relies on research that is heavily subsidized by public money. At public universities, Monsanto sponsors research, provides money for infrastructure, endows research fellowships and professorships, and licenses technologies. In the U.S., Monsanto has worked closely with the Agricultural Research Service, the United States Department of Agriculture's (USDA) key research body. Monsanto is also a part owner of the Biotechnology Research and Development Corporation, which "*combines government, academia and the private sector together in close working relationships.*" BDRC was formed after business leaders in the U.S., with close ties to USDA, successfully lobbied government officials to create and pass the 1986 Technology Transfer Act, which allowed private companies to enter into research and development agreements with federal labs. The Act, which helped the business leaders "overcome the hurdles of public domain," helped set the stage for the establishment of BDRC.

Lobbying tactics: In its 2002 10K report – which all companies are required to submit to the U.S. Securities and Exchange Commission on an annual basis - Monsanto admits that genetic contamination from its GE crops has occurred. However, its language is extremely cautious (Monsanto refers to contamination as "*adventitious or unintended trace presence of biotechnology materials in seed, grain or food*") and the company is only making this statement within the context of explaining its efforts to seek regulations that "*recognize and accept the adventitious presence...*"

Board of Directors stacked with influential individuals: Monsanto Board members include: Hugh Grant, board member of the International Policy Council of Agriculture, Food and Trade; Gwendolyn S. King, on President Bush's Commission to Strengthen Social Security, and board member of weapons producer Lockheed Martin Corporation; Sharon Long, Professor of Biological Sciences and Dean of the School of Humanities and Sciences at Stanford University; Steve McMillan, Chair, President and CEO of Sara Lee Corporations and board member of the Bank of America Corporation; George Poste, member of the Defense Science Board of the U.S. Department of Defense; and Robert Steven, on President Bush's Commission on the Future of the United States Aerospace Industry.

MONSANTO'S BUSINESS

GE products on the market

Product	Countries where commercially grown (year first commercially grown) and/or received planting, food and feed approval	Other details
Roundup Ready (RR) soybeans (Resistant to Roundup herbicide)	Argentina (1996); U.S (1996); Canada (1998); Romania (1999); Mexico (2000); Uruguay (2001); South Africa (2001)	Field trials and planting of smuggled seed in Brazil. Field trials have occurred in Bolivia and Indonesia. Grown for seed in Paraguay.
RR canola	Canada (1996); U.S.(1999)	Will likely be commercially grown in Australia in 2003/04.
RR cotton	U.S. (1997); Australia (2000); Argentina (2001); South Africa (2000)	Being developed for Brazil and Turkey.
RR corn	U.S. (1998); Bulgaria (1999); Canada (1999)	Pushing for approval in Argentina. Has been approved for 'cultivation and use' in South Africa. Field trials planned for India and have been conducted in Indonesia.
Bollgard cotton (Protection from budworm and bollworms)	Australia (1996); Mexico (1996); U.S. (1996); Argentina (1998); China (in several provinces) (1998); India (2002); Indonesia (2001); South Africa (1998)	Field trials are occurring in Burkina Faso
Bollgard II cotton (Second generation Bollgard cotton)	U.S. (2003); Australia (since 2003 in New South Wales and southern Queensland)	Pushing for approval in Argentina, Mexico and South Africa
YieldGard corn (Protection from corn borers and corn earworms)	U.S. (1997); Canada (1997); South Africa (1999); Argentina; Germany (2000); Philippines (2002); Honduras; Spain	Pushing for approval in Brazil, Bulgaria, the Honduras, Venezuela, Mexico, Hungary and Indonesia.
YieldGard Rootworm corn (Specifically targets corn rootworm larvae).	Canada (2003) ¹ Limited supplies available for the 2003 season; U.S.	
Bollgard/RR cotton	Australia; Mexico; U.S. (1997); South Africa (2002 approved)	
Bollgard II/RR cotton		Has been approved by regulatory authorities in the U.S. Monsanto has applied to plant in South Africa at two sites for production for U.S. seed supplies.
YieldGard/ RR corn	U.S. (2000)	
YieldGard Rootworm/RR corn	U.S. (2003)	
Posilac	U.S	GE growth hormone for increased dairy production in cattle. Extremely controversial product, which was not approved in Canada despite aggressive tactics by Monsanto.

¹ Limited supplies available in Eastern Canada from DEKALB for 2003 planting. Used mostly for research and on-farm trials designed to evaluate the benefits of the technology.

Monsanto has also conducted field trials in: Chile; Columbia; Egypt; Guatemala; Honduras; Kenya; Thailand; Japan; New Zealand; Czech Republic; Poland; Hungary; Ukraine; Russia; Bulgaria; Turkey; Israel

Monsanto Choice Genetics: Monsanto also has a swine genetics business called Monsanto Choice Genetics. It provides a line of pigs for breeding, called Genepacker, that are advertised as increasing the number of pigs produced per sow's lifetime, more consistent fertility rates and larger litter size. Through this business, Monsanto worked in partnership with Incyte Genomics to create the map of the swine genome. Monsanto expanded its swine genetics business in 2001 when its Canadian operation, Monsanto Canada, acquired Unipork Genetics, a division of United Grain Growers Ltd., based in Manitoba, Canada.

GE products in the pipeline

Monsanto currently invests more than 80 percent of its research and development budget into seed, genomics and biotech². Monsanto is depending on new product developments and approvals to boost its sales over the next several years, particularly in the GE seeds sector. The following is a list of key GE products that the corporation is working on.

Roundup Ready (RR) wheat: submitted for approval in Canada and the U.S, and could be approved for full commercial production by 2004. Export grain farmers are concerned about losing markets because many of the 70 countries that import Canadian wheat have stated they will refuse RR wheat or any wheat that has been contaminated by GE wheat.

Terminator Technology (sterile seeds): being developed and patented by Monsanto and other companies and public institutions (Syngenta, DuPont, BASF, Delta & Pine Land, the USDA, and Cornell, Purdue and Iowa State universities). Globally, farmers and non-farmers have voiced strong opposition to Terminator, which could make other crops' seeds sterile.

High starch corn for ethanol: being developed for ethanol production. While the high starch content is not obtained through genetic engineering, it is likely RR or Bt varieties of corn will be used. Using corn, in contrast to fast-growing grasses and trees, for ethanol is much less energy efficient. Monsanto's corn would require agrochemical inputs, while grass and trees would not.³

Functional food crops (functional foods are generally defined as containing special ingredients claimed to have health benefits): being developed by Monsanto so it can claim that biotech 'benefits the consumer.' However, these products will be most beneficial to food giants like Unilever and Nestle, because they will help cut costs in food processing. Some of the functional food crops that Monsanto has in its product pipeline:

- High stearate canola oil: does not contain any trans fatty acids. Will be used in the production of "healthy" margarines or shortenings. Speeds up processing.
- Increased essential amino acid level and/or oil content in corn and soy: for human food and animal feed. Involves genetically engineering certain amino acids into corn and soybeans. Eliminates the need to add these nutrients during processing.
- High omega-3 canola: developed by taking the gene from algae that produces omega-3 and inserted it into canola oil. Omega-3 fatty acids (naturally found in fish that eat algae) are said to help improve heart conditions and combat mental illness.

- Medium chain fatty acid canola: For use in medical nutrition (such as intravenous and infant formulas) and, potentially, in consumer products such as high-energy snacks and beverages and better-tasting low-calorie potato chips.

Vitamin A mustard, aka “Golden Mustard”: being developed with the Tata Energy Research Initiative in India and Michigan State University’s Ag Biotech Support Project for cooking oils to be sold in North and East India. This is part of Monsanto’s participation in the Global Vitamin A Partnership (established by Hilary Clinton) – a public-private initiative involving USAID, the World Health Organization, UN Children’s Fund (UNICEF). Monsanto is using this product to say that it is helping to ‘feed the hungry’ and ‘save lives.’ Meanwhile, there are numerous social and health concerns with the introduction of Golden Mustard.

Virus resistant crops in the global South – Monsanto is working with different research institutions in the global South, along with universities in the U.S. and groups like the United States Agency for International Development (USAID) and the International Service for the Acquisition of Agri-Biotech (ISAAA) to develop virus resistant crops. The strategy here is to provide free biotech research and development support for a local subsistence crop familiar to farmers and communities as a way of convincing people to trust GE seeds.⁴

Drought resistance genes: identified through a partnership between Monsanto and Mendel Biotechnology (Hayward, CA), Paradigm Genetics (Research Triangle Park, NC) and Ceres, Inc. (Malibu, CA). Research is in its early stages.⁵ Monsanto is promoting this research to convince people that they are developing crops that will help ‘feed the world.’

Sales

(figures in USD, billions)

Sales by Country/Region

Country/Region	2002	2001	2000
United States	2,986	3,358	3,089
South America	.571	.923	1,103
Europe-Africa	.619	.626	.635
Asia-Pacific	.316	.370	.449
Canada	.181	.185	.217
Total	4,673	5,462	5,493

Annual Sales

Product categories	2002	2001	2000
‘Agricultural Productivity’ (agrochemicals, rBGH, swine lines, ornamental pesticides)	3.1	3.7	3.9
‘Seeds and genomics’	1.6	1.7	1.6
Net sales	4.7	5.4	5.5

Operations

Headquarters: 800 North Lindbergh Blvd., St. Louis, Missouri 63167, United States

Global offices and plants located in: Argentina; Australia; Austria; Belgium; Brazil; Bulgaria; Canada; Chile; China; Colombia; Costa Rica; Croatia; Czech Republic; Denmark; France; Germany; Greece; Guatemala; Hong Kong; Hungary; India; Indonesia; Italy; Japan; Kenya; Korea; Malawi; Malaysia; Mexico; Pakistan; Philippines; Poland; Portugal; Puerto Rico; Romania; Russian Federation; Senegal; Singapore; Slovakia; South Africa; Spain; Taiwan; Tanzania; Thailand; Turkey; Ukraine; United Kingdom; United States; Venezuela; Vietnam; Zimbabwe

Subsidiaries

(does not include those carrying the Monsanto name)

Agracetus (Middleton, Wisconsin), acquired in 1996. Functional food products and plantibodies.

Asgrow (Des Moines, Iowa), acquired in 1997. Seed production and marketing company.

Calgene (Davis, California), acquired in 1997. GE seeds for produce, cotton and oils.

Cargill Seeds, acquired in 1998 for \$1.4 billion. Operations in Asia, Africa, Central and South America and Europe (excluding UK).

Corn States Hybrid Service (Des Moines, Iowa), acquired in 1997 for \$1 billion.

DEKALB genetics (DeKalb, Illinois), acquired in 1998 for \$2.3 billion. Has 11% of US corn seed market (2nd only to Pioneer Hi-Bred). Independently markets Monsanto technology.

First Line Seed (Guelph, Canada), acquired in 1998. Producer/distributor of RR soybean varieties.

Holden's Foundation Seeds Inc.: Acquired in 1997 for US\$1 billion. Develops, grows and supplies corn germplasm. Major supplier of parent seed to retail seed companies. (Acquisition included Corn States Hybrid Service, Inc. and Corn States International)

Limagrain Canada Seeds (Saskatoon, Saskatchewan), acquired in 2001. Major canola seed research, production and marketing company.

Maharasta Hybrid Seed Co (Mahyco) (Dawalwadi, Jalna), acquired in 1998. India's largest private seed company. Monsanto India owns 26%. There is a joint venture between Monsanto and Mahyco (50/50) called Mahyco Monsanto Biotech (MMB). Has commercially launched Bollgard cotton in India.

Monsoy, acquired by Monsanto in 1996. Largest soybean suppliers in Brazil.

PT Monagro Kimia, (Jakarta) Indonesia subsidiary of Monsanto.

Sementes Agrocere (Sao Paulo), acquired in 1997. Has 30% share of Brazilian corn seed market.

Board of Directors

Frank V. AtLee III, 62, Chair (Term: 2000-2004): Retired president of former American Cyanamid Company and chairman of former Cyanamid International. Serves on the boards of Antigenics Inc. and Nereus Pharmaceuticals, Inc.

Hugh Grant, 45, President and CEO (2003-2006): named director and Monsanto's president and CEO in May 2003. Has been with Monsanto since 1981. Board member of the International Policy Council on Agriculture, Food and Trade, member of the executive committee of the Microcredit Summit Campaign, international advisory board member of the Scottish Enterprise, board member of The United Way of Greater St. Louis.

Gwendolyn S. King, 62 (2001-2004): President of Podium Prose. Retired senior vice president, corporate and public affairs, PECO Energy Company. Served as the eleventh Commissioner of Social Security, 1989-1992. Appointed to President Bush's Commission to Strengthen Social Security, 2001. Board member of Lockheed Martin Corporation, Marsh and McLennan Companies, Inc., and Countrywide Financial Corporation.

Sharon R. Long, Ph.D., 51 (2002-2004): Professor of Biological Sciences and dean of the School of Humanities and Sciences at Stanford University. Elected to the National Academy of Sciences, the American Academy of Arts and Sciences, and the American Philosophical Association.

C. Steven McMillan, 57 (2000-2006): Chair, president and CEO of Sara Lee Corporation. Also serves on the boards of Bank of America Corporation and Sara Lee Corporation.

William U. Parfet, 56 (2000-2005): Chair and CEO of MPI Research Inc. Also serves on the boards of CMS Energy Corporation, PAREXEL International Corporation and Stryker Corporation.

George H. Poste, 58 (2003-2005): Chief executive of Health Technology Networks. Member of the Defense Science Board of the U.S. Department of Defense, and chairs that group's Task Force on Bioterrorism. Also serves on the boards of AdvancePCS, Maxygen, Inc., Illumina, Inc., and Orchid BioSciences, Inc.

Robert J. Stevens 51 (2002-2006): President, chief operating officer and director at Lockheed Martin Corporation. Was appointed to President Bush's Commission on the Future of the United States Aerospace Industry in February 2001.

MONSANTO'S PUBLIC RELATIONS

Advertising costs

(figures in USD, millions)

Year	Cost
2002	\$70 million
2001	\$96 million
2000	\$103 million
1999	\$96 million
1998	\$71 million
Total	\$436 million

Key Public Relations' Mottos

1997/1998/1999:

"Food, Health and Hope"

Monsanto began using this motto when it started selling its first GE seeds. This was Monsanto's initial attempt at transforming its image from a chemical to a 'Life Sciences' company. Formerly Monsanto used catch phrases like "Without chemicals, life itself would be impossible." Generally, a life sciences company applies biotech to seed, pharmaceutical (for humans and animals), vitamin, chemical and/or food production.

1999/2000:

"Abundant Food and a Healthy Environment"

Monsanto began pushing public relations' (PR) messages that claimed biotech would help 'feed the world.' It was learning from the backlash of its earlier PR aggressions and was working out a new strategy to save itself from the mess it had created, including hiding behind pharmaceutical giant Pharmacia, which had bought up Monsanto in 1999. Realizing that the public's confidence in GE crops and foods was low, Monsanto and other agro biotech corporations were turning towards a new strategy – promoting so-called benefits of biotech in medicine. Biotech, they began saying, would 'help save lives.'

key events

Europe: In 1997/98 Monsanto launched an aggressive public relations campaign in Europe, particularly in the United Kingdom, geared mainly towards the upper and upper-middle class. The goal was to convince the public that its biotech products were "environmentally sustainable." The campaign backfired. People began to actively oppose the claims Monsanto made about the so-called 'benefits' of GE seeds/crops/food.

Fox rBGH suit: In 1997, Fox Television reporters Jane Akre and Steve Wilson were notified by a general manager at WVTM (a Fox Television affiliate) that they would be fired for creating a critical documentary on Monsanto's Posilac (recombinant Bovine Growth Hormone). This was after a lawyer, hired by Monsanto, had sent a threatening letter pressuring Fox not to air the documentary.

Fake protestors: In December 1999, *The New York Times* reported that Monsanto's PR company, Burson-Marsteller, paid a Baptist Church from a poor mainly African American neighbourhood to bus in "demonstrators" to disrupt an anti-GE

2000/2001/2002:

“The New Monsanto Pledge: Dialogue; Transparency; Respect; Sharing; Benefits.”

Launching a comeback to bold PR moves, Monsanto's strategy became a new 'Pledge' that superficially addresses peoples' concerns of GE crops/foods. Monsanto began using words like 'dialogue,' 'transparency,' 'respect,' 'sharing' and 'benefits' -- the same words used by many of its critics. However, in reality Monsanto has a different understanding of the words. For instance, Monsanto continued to aggressively push for approval of its GE seeds in India and the Philippines, despite massive protest from farmers.

2003:

“Imagine ... helping others help children to see ... corn fueling cars... better crops helping farm families live better lives... dirt being one of our national treasures...growing crops with less pesticide sprayings... innovative agriculture that creates incredible things”

Monsanto begins a new motto, this time it's 'Imagine' with the 'ag' in a different colour (as appears on the official Monsanto website) to suggest 'agriculture.' Monsanto is using similar messages as it has in the past. In a new report by Sarah Wright called "Selling Food, Health and Hope™: The Real Story Behind the Monsanto Corporation," she tells it like it is,

Imagine a world where giant chemical corporations control the food we eat, the seeds we grow and the water we drink. Imagine a world where it is not even possible to save a seed without facing up to seven years in prison; a world where tomatoes contain the genes of fish, and the seeds of our plants are genetically altered to be sterile. Imagine a world where the water and air are poisoned.⁶

street protest outside a U.S. Food and Drug Administration public hearing in Washington DC. The "demonstrators" carried placards such as "Biotech saves children's lives" and "Biotech equals jobs." This was part of a larger strategy to get church members, union workers and the elderly to speak in favour of GE foods. (Melody Petersen, "Monsanto Campaign Tries to Gain Support for Gene-Altered Food," in *The New York Times*, December 8, 1999).

Council for Biotechnology Information

(CBI): In March 2000, Monsanto, Dow, Aventis (now Bayer), Novartis (now Syngenta), DuPont and BASF entered a multiyear contract with BSMG to target doubts about GE foods in North America. The corporations agreed to contribute a total of \$250 million to this PR campaign. Two groups were established for the sole purpose of promoting GE foods and crops. First the Alliance for Better Foods was created, then the Council for Biotechnology Information, which runs television, radio and print advertisements throughout North America promoting biotech.

Representation: Monsanto uses 'representatives' from Asia and Africa in its PR strategy to counter criticisms and convince the public that people in the global South accept biotech. For example, Chengal Reddy, who poses to be a farmer from the state of Andhra Pradesh in India, is featured prominently in a glossy 2000 Monsanto brochure "A Celebration of Fifty Years in India." He is also found backing Monsanto's policies in several pieces on the Monsanto India website (www.monsantoindia.com). Reddy, however, has never farmed in his life and his family is a prominent right-wing political force in Andhra.

Give-aways: Monsanto began a trend in 2000 of donating its genomics research 'free-of-charge' and 'royalty-free' to help develop GE crops that would 'feed the world.' It started with its data on the rice genome. Monsanto says this is part of its 'New Pledge' on 'sharing.' In reality this is part of a larger strategy to introduce GE versions of familiar crops in order to build confidence in GE and acceptance for mass commercialization of major cash crops.

MONSANTO MARKETS

One of Monsanto's longer-term strategies is to open up more markets for its GE seeds. In particular, it is seeking approval for its GE seeds in countries like Brazil, which is a key soybean producer, India, which is a major cotton producer, the Philippines where corn is a significant cash crop, and Burkina Faso, which is a major cotton producer in West Africa. Already, Monsanto has secured a major presence in the U.S., Canada, Argentina, South Africa and Australia with its GE seeds. Monsanto is using approval of its GE seeds in countries in the global South to claim that 'hungry' nations are in favour of biotech and need the technology.

A more recent claim made by biotech proponents is that the resistance to GE crops and foods in Europe could impede progress and global use of GE, which could be of great benefit to farmers and consumers, particularly in the global South. European Union's *de facto* moratorium on the approval of new GE seeds and imports has also been criticized as negatively impacting African exports of crop commodities. In reality, however, African countries do not export crops like corn and sweet potato to Europe. Monsanto's Yieldgard corn has been approved in South Africa, while the corporation has been developing a GE virus-resistant sweet potato in Kenya. The only crop that is potentially affected is cotton. Even still, South Africa, which grows Monsanto's Bollgard cotton commercially, does not export cotton to the EU. Cotton is actually imported to the country because farmers there cannot produce enough to meet domestic demand.

SUBSAHARAN AFRICA

Monsanto had made intensive efforts to get into other African markets with its GE seeds. After being unsuccessful in Zimbabwe, Zambia and Tanzania, it made its way into South Africa, as well as Kenya, Uganda and Burkina Faso. In addition, Monsanto has recently joined forces with other GE seed giants (including Syngenta, Dow and DuPont's Pioneer) to establish The African Agricultural Technology Foundation. Through the Foundation, the corporations will work with African scientists on technologies that, they claim, will help increase food production. The Foundation's purpose is to identify crop problems in Africa that might be amenable to technological solutions, then negotiate for assistance and patent licenses with the corporations, and seek support from African governments to help distribute outputs to small-scale subsistence farmers across Africa. This appears to be another public relations move and tactic to infiltrate agricultural production systems in Africa.

Burkina Faso

Bt cotton field trials: In late June 2003, Monsanto began conducting trials of its Bollgard cotton at two research stations in Burkina Faso, the first such tests in West Africa. The trials are part of a research agreement signed between Monsanto and the country's government.⁷ In July 2003, SOFITEX, or the Burkina Faso Fibre and Textile Company – a quasi-government company, organized an international workshop on GE and cotton. In attendance were representatives from Monsanto and Syngenta, which are expected to work closely with Burkinabe researchers to develop *Bt* cotton using a local variety.

There are hopes that the GE cotton will eventually be grown in the rest of West Africa. Burkina Faso is the second largest producer of cotton in West Africa after Mali and its economy relies on cotton that provides more than 60 percent of the national income. SOFITEX is hoping the *Bt* crops will help fight pests that have become resistant to pesticides, as well as increase yields. Burkinabe farmers have been lured by claims made by some South African farmers of increased

yields since growing *Bt* cotton. Yet, there are concerns that the GE seeds will be too expensive for farmers.

But while high yields are being promised, there has already been evidence of overproduction, which has led to low selling prices. In the 1990s, the International Monetary Fund/World Bank pushed the reorganization of Burkina Faso's agricultural sector. The government provided new seed varieties and other support services to cotton farmers to increase yields for export. Cotton production increased from 117,000 tonnes in 1993/94 to about 400,000 tonnes in 2001/02. As a result, Burkina Faso has an abundance of cotton. The international selling price is low in part due to the collapse of world market prices of cotton. Meanwhile, resources (e.g. arable land and water) for food production in Burkina Faso are limited.⁸

South Africa

Monsanto's influence in South Africa: South Africa is now the fifth largest GE crop producing country worldwide, producing RR soybeans, Bollgard cotton and YieldGard corn commercially. South Africa's National Strategy on Biotechnology, created in 2001, was based on consultations with Monsanto (as well as a large commercial farmers' association and other biotech corporations, including Syngenta). It is reported that Monsanto and the Department of Agriculture have been handing out free GE seeds to small-scale farmers in South Africa. Monsanto has also provided money, land and infrastructure to train black farmers in South Africa. This has occurred amidst limited resources towards strengthening the black commercial farming sector by the country's government. In 2000, Monsanto converted its research station in Delmas Mpumalanga into the Buhle Academy and agreed to fund Buhle for its first three years of operation (from 2000 – 2003). Monsanto says that Buhle contributes to social and economic improvements of local agricultural communities. But prospective students at Buhle are required to show they have access to land before they can gain entry into the Academy, meaning that admittance is limited since the majority of farmland in South Africa is owned by white farmers. And while 120 farmers have been trained at the Academy there is no evidence that this has led to any useful results.

The Makhathini Flats: Perhaps the most significant presence of Monsanto's GE seeds is the Makhathini Flats, in the country's north-eastern corner, where 95% of the 4,000 smallholder farmers are growing *Bt* cotton. Why such a massive adoption? Vunisa Cotton has an agribusiness monopoly in Makhathini. It is a private, commercial supplier of seed, fertilizer, pesticide, credit and information to smallholder farmers in the region, as well as a buyer of cotton harvest. Vunisa heavily promotes and sells *Bt* cotton seed. (The seed is supplied by Delta & Pineland, and was developed using a *Bt* gene owned by Monsanto). Many poor farmers in Makhathini have little choice but to enter contracts offered by Vunisa whereby *Bt* cotton seed is loaned on the condition that crops are sold back to the company at 20% to 40% of the world market price, putting farmers into a cycle of loans and debt.

There are claims that *Bt* cotton has led to economic benefits for smallholder farmers in Makhathini but they are heavily influenced by Monsanto. From 1998 to 2000, researchers at the University of Reading (Berkshire, UK) conducted a survey of farmers, who were not chosen from a random sample but handpicked with the help of Monsanto. Critics point out that farmers spend more money on GE seeds, which are twice as expensive as conventional ones, than they save in pesticide reductions. Other perceived weaknesses are the vulnerability of *Bt* cotton crops in South Africa to pests like the pink bollworm and jassids (or leafhoppers), and the susceptibility of the crops to American bollworm during the middle and end of season and times of stress (like low soil fertility or minimal rainfall) when levels of *Bt* toxins are low in the GE plants. In addition, new pests, such as sting bud, have appeared (as is reported in China).

Paying off farmers: Selling a positive image of itself to farmers, policy makers and critics, Monsanto has been paying black farmers to promote GE crops. T.J. Buthelezi of Makhathini has

been paid by Monsanto to act as an African 'representative.' Buthelezi has spoken of his positive experiences with Bollgard cotton at conferences and events around the world. He has also met with U.S. Congress members and was paid by Monsanto to have lunch with U.S. Trade Secretary Robert Zoellick at the corporation's office near Pretoria. In August 2002 Buthelezi and Monsanto organized pro-biotech booths, interviews and rallies at the World Summit on Sustainable Development in Johannesburg. In May 2003, when Zoellick publicly announced the U.S. challenge against EU's *de facto* moratorium at the WTO, Buthelezi was by his side. While Buthelezi is made out to be a 'small farmer,' he is actually one of Makhathini's largest, with 66 acres of land. Monsanto has also flown four other black South African GE crop farmers to London, where they spoke at a private conference hosted by the Commonwealth Business Council, before heading on to Denmark and Germany.

Resistance: BioWatch is an advocacy organization that has been working on anti-biotech campaigns in South Africa. BioWatch is involved in monitoring the impacts of GE organisms in South Africa. Safeage (South African Freeze Alliance on Genetic Engineering) is a campaign that demands a five-year freeze on the growing of GE crops in open fields until the technology is proven safe, environmentally harmless and in the public interests of the people of South Africa and neighbouring countries. It also calls for a freeze on the import and export of GE foods and crops and the patenting of genetic resources for food and crops.

SOUTH AND SOUTHEAST ASIA

South and Southeast Asia have become key targets for Monsanto. Over the past few years, despite massive grassroots resistance, Monsanto has gained commercial approval for its Bt cotton in India and Indonesia, and Bt corn in the Philippines. Monsanto has been relentless, as it sees this region as being key to its economic growth.

India

Bt cotton: In March 26, 2002 three varieties of Monsanto's *Bt* cotton were approved for commercial cultivation in six states located in central and southern India - Andhra Pradesh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra and Tamil Nadu. In these six states, Bt cotton acreage increased from 30,000 hectares in 2002 to 100,000 hectares in 2003. Monsanto hopes to have more hectares covered as the government allows for greater quantities of the seed to be sold. In addition, in October 2003, Indian Agriculture Commissioner Charudatta D. Mayee announced that an additional 25 varieties of Bt cotton will likely be released onto the Indian market by 2005 from companies like Raasi and Ankur Seeds. India is among the top 10 seed markets in the world.*

Monsanto's *Bt* cotton is distributed by Mahyco Monsanto Biotech, a joint venture between Monsanto and its partial subsidiary Maharasta Hybrid Seed Co (Mahyco). Monsanto also has seven partners in India developing variants of its *Bt* cotton. Mahendra and Paras of the Emergent group, Nath Seeds, Ankur Seeds, Ajeet Seeds, Raasi Seeds, Krishi Dhan and Nuziveedu Seeds are preparing to release their *Bt* cotton hybrids for commercialisation by 2006. While Nath is sourcing the gene from the Biocentury Transgene Company, a Chinese firm, the other players have entered into sublicensing agreements with Monsanto.

* Rabobank International forecasts further consolidation of the Indian seed industry, which is already among the top 10 in the world, with players either exiting the market or being acquired by larger players. The Association of Seed Industry projects that India's traded seed market is set to triple by 2010 as more farmers adopt commercial seeds to boost yields.

Bt cotton failure?: There are a number of reports coming in that point out the failure of Bt cotton in India. One study was conducted by Acharya N.G. Ranga Agricultural University in 2003 and was based on a survey from 100 farming families who were selected by random sampling of those who grew Bt cotton in Maharashtra and Andhra Pradesh. The Bt cotton was found to produce fewer bolls per plant and shorter fibre length than non-GE crops, and did not protect against pink bollworm. It found that seed is about 4 times more expensive than local non-GE hybrids, while savings in pesticides were modest.⁹ A study conducted by the Research Foundation for Science, Technology and Ecology in 2002 (from March to July) in Maharashtra, Madhya Pradesh, Andhra Pradesh and Karnataka showed that Monsanto's cotton did not protect the plants from the American Bollworm and that there was a 250-300% increase in attacks by non-target pests like Jassids. It also found that *Bt* plants became prey to fungal diseases like fusarium, gave very low yields, fetched a low price in the market and required more fertilizers and water than non-GE crops.¹⁰ In the spring of 2003, the Genetic Engineering Approval Committee rejected the Mahyco's application for Bt cotton in Northern states because the crop is prone to leaf curl virus.

An anomaly to the studies mentioned above, as well as to others, is a paper published in February 2003 in the influential journal *Science*. The paper, by two researchers from the University of California at Berkeley and the University of Bonn, states that average yields of Bt cotton were higher than yields from non-Bt cotton by 80% during 2001 field trials in India¹¹. The findings from this study have been heavily promoted by Monsanto and other biotech proponents. Importantly, Qaim and Zilberman based their paper on farm field trials conducted by Mahyco, the same experiments that the Indian federal government used to make its decision on approving commercial production of Bt cotton.

Resistance: The approval of Bt cotton was highly controversial. Activists allege that Monsanto illegally tested its Bt-cotton seeds in India – Vandana Shiva exposed these trials in 1998. That same year, the Karnataka State Farmers Association, which includes 10 million farmers in the Southern Indian state, launched its Operation Cremate Monsanto campaign in response to the secretive plantings. Farmers burned entire fields of *Bt* cotton trials. GEAC has even had to order that illegal test plots of Monsanto's Bt cotton be destroyed. Another campaign called Monsanto Quit India was also launched in 1998, symbolically on the 9th of August – the anniversary of the day that Gandhi told the British to 'Quit India.' The campaign was backed by a coalition of non-governmental organizations (NGOs). It was launched in response to the purchase of Mahyco, the largest Indian seed company, the takeover by Monsanto of a lab in India's premier research institute, the Indian Institute of Science in Bangalore, the free import of GE soybeans into India and the illegal field testing of Monsanto's Bollgard cotton. Thousands of postcards were distributed to NGOs, community groups and farmers across India. Within four months of the campaign launch, more than 10,000 people signed and sent the postcards to Monsanto's headquarters in St. Louis, Missouri.

Indonesia

Bt cotton in Indonesia: Indonesia was the first country in Southeast Asia to grow GE crops. Yet in Indonesia, the only regulation on GE products is a Joint Decree signed by the Minister of Agriculture, Minister of Health, Minister of Forestry and Plantation and the State Minister of Food and Horticulture. It states that GE products are safe unless proven otherwise. The government's official response to GE crops is still unsettled. Within the government are clashes of opinion. The Ministry of Environment is against the introduction of GE crops without further testing, while the Ministry of Agriculture says that GE crops are more productive than conventional crops and can be used to solve food shortages in Indonesia.

On March 15, 2001 40 tons of Monsanto's Bt cotton were flown into South Sulawesi. The seeds, to be sold to farmers in South Sulawesi, were imported from South Africa by Monsanto's

Indonesian subsidiary PT Monagro Kimia. Activists protested the government since the seeds had not gone through the required quarantine process before being released to the public. The shipment of seeds came only five weeks after a decree was signed by the Minister of Agriculture, which allowed for a limited release of Bt cotton in seven districts in South Sulawesi. Meanwhile even before the decree was signed, PT Monagro Kimia had conducted secretive field tests for Bt cotton in two districts in South Sulawesi, involving 600 farmers and 500 hectares of land.

Farmers deceived in field test: Prior to these tests, extension workers from the country's Agricultural Service told farmers that *Bt* seeds would produce higher yields – as many as four tons of cotton per hectare in any kind of soil – and lead to greater profits. (Meanwhile, local varieties of seed the farmers usually planted had become hard to find. Some farmers felt that this was a false shortage created to force farmers to try Bt cotton seed). Farmers, who were required to buy the Bt seeds for the tests, were also told that PT Branita Sandhini, a subsidiary of PT Monagro Kimia, would buy the crops.

After several months of growing Monsanto's Bt cotton, the farmers realized they had been deceived. They did not see larger yields. Only 2% of the farmers produced four tons per hectare, while many farmers had yields of only 70 to 120 kg per hectare. Data from the Ministry of Agriculture indicates that cotton production in Indonesia yields 400 to 500 kg per hectare annually. PT Branita Sandhini refused to buy farmers' crops. When farmers tried to sell their cotton to other buyers, none were willing to buy it because they were afraid of retaliation from PT Branita Sandhini. In desperation, farmers burned the cotton. Some farmers had even shifted from growing food crops in hopes that the Bt cotton would provide them with sufficient returns.

More farmers unhappy: Farmers who have been growing Bt cotton for commercial purposes have been faced with increasing prices over the past three years. Even for the farmers who participate in the field tests the price for Bt cotton seed increased from Rp40,000/kg to Rp120,000/kg (Rp 8,888 = USD 1) from planting to harvest time. In contrast, the buying price of rough cotton has been decreasing. A survey conducted by YPR, a local non-governmental organization in Bulukumba (located on the south-eastern coast of South Sulawesi), revealed that Bt cotton production was on average less than a ton per hectare. Around 24 farmers, popularly known as Monsanto-organised Bt cotton growers, lodged a complaint to the legal aid foundation chapter of South Sulawesi. They revealed that Monsanto, without clear reason, has discontinued supplying Bt cotton seeds since March 2002. As a result, they missed their 2003 planting season. They are demanding around Rp200 billion as compensation from Monsanto.

The Philippines

Monsanto relentless with Bt corn: In December 2002 Philippine authorities approved Monsanto's Yieldgard corn making the Philippines the first Asian country to approve commercial growing of Bt corn. Monsanto has been relentless in its efforts to get its Bt corn approved in the Philippines. Several bills seeking to regulate genetically engineered crops were submitted to Congress but have not made progress. Monsanto and AGILE (a lobby group that receives USAID funds) have been trying to block the passage of these bills¹². Meanwhile, during a meeting with the group, Art Salazar, head of the Department of Agriculture's Corn Program, admitted that contamination of the country's agricultural crops had already occurred due to field testing of Bt corn, despite the Department's earlier claims that native corn varieties and other plants would not be contaminated.

Resistance: Much like the controversy in India, Monsanto used illegal field trials. Activists resorted to direct action after Monsanto and Pioneer Hi-Bred were sued for illegal field tests of Bt corn in 1999 and 2001. In August 2001, close to 800 farmers, indigenous Lumad people, students and others participated in "Operation Bunot (uproot)," pulling all of the *Bt* corn plants from a 1,700 square metre experimental field owned by Monsanto's Agroseed in Maltana village in southern

Philippines. In both cases the companies failed to appear in court until the field trials were over, the crops harvested, and the case was moot. Peasants and farmers, through organizations like *Kilusang Magbubukid ng Pilipinas* (KMP, aka the Philippines Peasant Movement, see www.geocities.com/kmp_ph) and Resistance and Solidarity Against Agrochemical TNCs (see www.geocities.com/resist_agtncs/index.html) have been actively protesting the testing and commercialization of Monsanto and Pioneer's *Bt* corn. They argue that *Bt* corn is not helpful to them since the GE corn is intended for feeding animals for the meat industry and not for direct human consumption. As well, they say that the infestation of corn borers is not a serious problem in the southern Philippines, where field trials occurred, and peasants have been able to manage the pests on their own. Most recently, a small group of environmentalists went on a hunger strike at the Department of Agriculture to demand a moratorium on the commercialization, sale and planting of GE crops. The strike lasted a month. One of the hunger strikers, following the end of the strike said, "We have done everything humanly possible to stop these poisoned seeds. We have not failed. The Macapagal administration has failed us." The strikers ended their fast so that they could join the efforts to control *Bt* corn contamination and to stop further genetic contamination by other GE crops.¹³

CENTRAL AND EASTERN EUROPE

Gaining acceptance for its GE seeds has been a major challenge for Monsanto in Western and Northern Europe. In October 2003, Monsanto announced that it was pulling out of its European cereal seed business, and selling its subsidiary Plant Breeding International (located in Cambridge, England). In 1998, the European Union, consisting of Western and Northern European nations at the time, established its de facto moratorium on new approvals of GE seeds and imports. This presented a major blow to Monsanto and other GE seed corporations. Monsanto joined farm lobby groups that pressured the Bush Administration to challenge the moratorium at the World Trade Organization (WTO). (Rufus Yerxa, former U.S. Ambassador to the General Agreement on Tariffs and Trade and International Counsel to Monsanto, was appointed as the U.S. deputy to the new Director General of the WTO). In the meantime, Monsanto has been targeting countries in Central and Eastern Europe like Bulgaria and Romania (not expected to officially join the EU until after 2004) to make its way into European markets.

Bulgaria

Why Bulgaria?: In 1998, Monsanto (along with DuPont's Pioneer and Novartis, now Syngenta) applied for permits to commercialize GE crops in Bulgaria. By 1999, Monsanto's RR corn and Yieldgard corn were being grown by farmers in the country. Corn is Bulgaria's main export crop. Bulgaria is now caught between aggressive GE seed pushers like Monsanto, and corporate food processors and commodity traders who want GE free products for the EU market.

In 1996, Bulgaria became the first country in Central and Eastern Europe to establish regulations for the biosafety of GE higher plants. (It should be noted, however, that this regulation is based on a law from 1958 on Seeds and Seed Material, and was not required to be passed by parliament). This provided Monsanto with incentive to seek approval in Bulgaria. Based on research undertaken in countries like Poland and Hungary (as well as South Africa) Monsanto is reluctant to initiate GE experiments in the complete absence of any regulations. Notably, an advantage for Monsanto is that Bulgaria, as opposed to countries in Western Europe, does not require public access to information and participation when it comes to GE products. Releases of GE organisms are in fact kept secret by law. Monsanto's initial interest in Bulgaria was also related to the fact that the country had not yet been officially invited to join the EU and was therefore not expected to harmonize its regulations with those of the EU. (Bulgaria was officially invited to join the EU in 2000).

As a result of the government's secrecy, there are conflicting reports of the commercial growth of GE crops in Bulgaria. As of 2001, the official line of the government was that only field trials of GE corn had been taking place in Bulgaria since 1998. But in 2000, Panacea, a seed distributor in Bulgaria, was selling Monsanto's RR corn seed to farmers for \$(USD) 907 per package, which contained 5 packets of seed (each containing 80,000 to 100,000 seeds) and 30 litres of Roundup.¹⁴

Monsanto connection: In Bulgaria it is the Council for the Safe Use of GE Higher Plants that has the authority to permit the import and growth of GE seeds in the country. This Council was established in 1998 out of Bulgaria's 1996 regulations on biosafety. The Council, chaired by the Deputy Minister of Agriculture, includes Professor Atanas Atanassov as its Executive Secretary. Prof. Atanassov is the Director of the Institute for Genetic Engineering. According to a report called "*Bulgaria: The Corporate European Playground for Genetically Engineered Food and Agriculture*" prepared for non-governmental organization (NGO) groups EcoSouthWest and ANPED (The Northern Alliance for Sustainability), Prof. Atanassov is the "linchpin" in Bulgaria's GE seed activities. The Institute for Genetic Engineering plays a key role in the granting of permits to companies like Monsanto for the release of GE seeds. Meanwhile, Prof. Atanassov has also been involved in the preparation of a new draft bill on GE organisms.

Resistance: In 2000, a coalition of NGOs, including EcoSouthWest and ANPED, launched a campaign to increase public awareness of GE foods and crops in Bulgaria. Part of the campaign included the release of the EcoSouthWest/ANPED report in May 2000. Within a month of releasing the report, the head of the parliamentary Environment Committee, Mr. Toshev, called for a moratorium on the commercialization of GE organisms. The Committee rejected the proposal because it would confirm that Bulgarian farmers were already growing GE crops commercially. While the Committee did agree to cut all government funding for research and development of GE tobacco and vines (important agricultural exports for Bulgaria), no action was taken on the distribution and release of GE corn seeds.

LATIN AMERICA

Monsanto is gaining more and more ground in Latin America. Argentina is the second largest producer of GE crops in the world. Now Monsanto is focused on Brazil, a major agricultural producer, with soybeans being a main crop. Seeing the economic potential, while trying to gain public confidence after negative publicity of genetic contamination of native Mexican corn varieties by Monsanto's RR and Bt corn, which are illegal in Mexico, Monsanto wants Brazil to permanently legalize its GE seeds.

Brazil

RR soybean push: Brazil is the world's second largest soybean producer and exporter. In 1998, Monsanto applied for approval of its RR soybeans. Approval was granted from the National Biosafety Committee (Comissão Técnica Nacional de Biossegurança – CNTBio) that same year. In response, Greenpeace and the Institute for Consumer Protection (IDEC) went to court to challenge the legal authority of the CNTBio in court. The courts decided in favour of Greenpeace and IDEC, finding that, according to the Law of Biosecurity, the Ministries of Health, the Environment and Agriculture are responsible for approving Roundup Ready soybeans not the CNTBio. The courts ruled that the cultivation of GE crops be suspended until an environmental impact study is conducted. Neither Monsanto nor the ruling governments have carried out such a study. Monsanto has continued to pursue approval.

In December 2001, Monsanto established a \$350 million chemical plant in Sao Paulo that produces components for the Roundup herbicide. The government of Fernando Henrique Cardoso (President of Brazil at the time) provided a low-interest loan of \$250 million to Monsanto for the construction of the plant¹⁵. The establishment of the plant was part of Monsanto's strategy to realign some of its international agrochemical and seed production to Brazil. Monsanto also launched an extensive public relations campaign, holding seminars for media, and others who might "form public opinion," as well as lobbied government representatives. In March 2003, Frank AtLee, chairman, and then interim CEO of Monsanto, went to Brazil to try to lobby the government on the so-called benefits of GE crops¹⁶.

In September 2003 Vice President of Brazil José Alencar (of the new government under Luis Inacio Lula da Silva, leader of the labour party) signed a decree to allow certain farmers – those who have already been growing smuggled RR soybean seed – to plant RR soybeans for one growing season. Farmers who plant the seeds must sign an agreement with the government saying they will take financial responsibility for any environmental damage that results from planting GE soy. As well, farmers are not allowed to sell seed saved from RR crops. According to a June 2003 article by Via Campesina in the weekly newspaper *Brasil de Fato*, the GE soy will be commercialized until January 31, 2004 after which time the entire stock will be conventional¹⁷.

Smuggled seed: Large numbers of small farmers in Rio Grande do Sul in southern Brazil have been growing RR soybeans from smuggled seed, believed to have come from Argentina and Paraguay. Estimates of how much of Brazil's soybean crops are planted with RR seed vary from 10% to 30%. In Rio Grande do Sul, the estimate is as high as 70%. While the new decree lets farmers grow RR soybeans legally, some pro-biotech groups, like the American Soybean Association, have complained that Brazilian growers have not been paying for patented seed technology, and that has given them a 'competitive advantage' over U.S. farmers. At the same time, Monsanto has begun to implement a royalty collection system, in which the corporation can collect royalties from local exporters for RR soybeans now that the seed is legalized.¹⁸

Resistance: In June 2003 members of the landless workers movement in Brazil (MST) invaded a farm owned by Monsanto in the central state of Goias. It was the third protest of this kind against Monsanto property in 2003. Monsanto has urged the government to take back the land, warning that repeated invasions "damage the image of the country". The MST says the centre is being used to grow and stockpile seeds, ready to flood the market if GE is legalised in Brazil. Brazil's new Workers' Party government has expressed sympathy with the aims of the huge MST, but the two have clashed over the pace of agrarian reforms. Monsanto claims that these kind of invasions compromise scientific 'progress' in Brazil. MST stated the objective of the occupation was "to expel" Monsanto from the state and convert the 43 hectares (106 acre) farm to organic production.

The latest decree signed by Alencar sparked strong responses. Attorney General Claudio Fontelles filed a request asking the Supreme Court to overrule the decree, claiming that the planting of RR soybeans without an environmental impact study is unconstitutional. The National Farm Workers Confederation filed a similar suit using the same argument, followed by the Green Party.

MONSANTO RESEARCH

University Ties

California Polytechnic State University: In 2002 Monsanto provided \$450,000 over 5 years to create the Dairy Cattle Applied Research and Technology program to assess the

impacts of new techniques and technologies, including biotech, on “high-producing, high-genotype commercial dairy herds.”¹⁹

Furman University: political science department received \$100,000 from Monsanto (1999)

Harvard University: Dr. Jeffrey Sachs, Director of the Center for International Development at Harvard sits on Monsanto’s Biotechnology Advisory Council

Iowa State University: ISU’s College of Agriculture’s Jon J. Tollefson and Jim Oleson received a \$10,000 grant from Monsanto for research entitled “Flight of Male and Virgin Female Western Corn Rootworm Adults.” Walter R. Fehr, the Charles F. Curtiss Distinguished Professor in Agriculture at ISU and director of the state’s Office of Biotechnology was named the 2002 recipient of the Monsanto crop Science Distinguished Career Award²⁰. Monsanto also gave two of its ‘Monsanto Diversity Graduate Research Fellowships’ to two ISU plant genetics students in 2002. These are one-year fellowships that help “outstanding minority students develop research careers in the plant sciences.”²¹

John Hopkins University: Dr. Lynn Goldman, pediatrician and professor at the Bloomberg School of Public Health, principal investigator for the Children’s Health component of Pew Environmental Health Commission and formerly administrator with the U.S. EPA, Office of Prevention, Pesticides and Toxic Substances sits on Monsanto’s Biotechnology Advisory Council.

Kansas State University: forming a spin-off/start-up corporation to sell GE soybean seeds as part of a deal with Monsanto. The non-profit company will be called Wildcat Genetics. Wildcat will sell seeds in which Monsanto’s RR technology is applied to soybean varieties developed by the university. The University hopes to gain a 20% market share in Kansas with its new seed.²²

Michigan State University: runs the Agricultural Biotechnology Support Project (ABSP). In December 2000, Monsanto launched a multi-year project with the Tata Energy Research Institute (TERI) a non-profit Indian research institute, and ABSP to develop varieties of Vitamin A mustard, aka “golden mustard”. Michael Allen, Animal Science Professor, received an \$80,000 grant from Monsanto in February 1999.

North Carolina State University: associate professor Dominique Robertson created a faster gene-silencing technique. Monsanto is a sponsor of the research, and has an option to the technology, while NCSU received a patent for the technology in April 1999.

North Dakota State University: Monsanto has GE wheat trials at some North Dakota State University field stations. Exact locations have not been disclosed²³. These field trials are part of agreements between NDSU and Monsanto to commercialize products using Monsanto technologies. NDSU has established a licensing program called “Roughrider Genetics,” a trademark brand name established for the marketing of licensed or proprietary varieties own and managed by the NDSU Research Foundation.²⁴

Oregon State University: In November 2000, OSU announced that Monsanto had donated wheat germplasm and seed stocks (from non-GE varieties) to the university’s wheat breeding program. The donation represented an investment of several million dollars in breeding and development research. This represented a continuation of earlier collaboration between OSU and HybriTech International, a subsidiary of Monsanto. OSU is not to provide any seed or germplasm from the donated materials to any of Monsanto’s commercial competitors. Stocks will be shared with other breeding programs at Washington State University, University of Idaho and the United States Department of Agriculture.²⁵ OSU also has an agreement with Monsanto, possibly part of the donation, to develop GE wheat²⁶. The Tree Genetic Engineering Research Cooperative is based at OSU. One of the experiments occurring at the Cooperative is

engineering Monsanto's RR gene into the cells of polar trees. Monsanto, Shell and the US Department of Energy also funded research at OSU on the prevention of flowering in black cottonwood²⁷ for the purpose of speeding up breeding and research. Several hundred lines of GE trees containing various types of genes that are expected to affect flowering have been created and are being grown in field tests²⁸. In mid-March 2001, concerned OSU students and alumni targeted three GE test sites where Poplar and Cottonwood trees are being grown. 90 % of the trees were ring-barked or cut down.²⁹

Purdue University, University of Illinois at Urbana-Champaign, University of Missouri-Columbia and Washington University: – The Danforth Center was established by Monsanto, The Missouri Botanical Garden, Purdue University, University of Illinois at Urbana-Champaign, University of Missouri-Columbia and Washington University in St. Louis. The Monsanto Fund (Monsanto's charitable component) contributed an initial \$40 million, and pledged another \$30 million from 1998-2002 for the Center. Monsanto also donated land for the center -- a 40.3-acre tract adjacent to its St. Louis campus valued at \$11.4 million. Meanwhile, the state of Missouri provided its largest allocation ever of economic development tax credits --\$25 million. Hugh Grant, Monsanto's CEO, joined the Center's Board of Directors in June 2003. Part of the Danforth Center's mission is to facilitate the development and transferring of technologies for countries in the global South. The Monsanto Fund is funding research to the Danforth Center's efforts to develop a virus-resistant cassava. The Danforth Center has offered a 'royalty-free license' to enable technologies used in agricultural biotechnology to increase production and quality of cassava.³⁰

South Dakota State University: In 2000 SDSU and Monsanto entered into an agreement under which university researchers were to incorporate the RR gene into soybean varieties developed to suit South Dakota growing conditions. This was the first time Monsanto had used a land-grant college as a way to make its technology available to farmers.³¹

Southeast Missouri State University: Two faculty members of the Department of Agriculture are former employees of Monsanto. Dr. Donn Beighley, who specializes in rice and soybean breeding and wheat testing, once worked as a project leader and assistant research director for Monsanto's Hartz Seed Co. Dr. William Ellis, who specializes in swine and beef production management and agribusiness, also worked for Monsanto.³²

University of California: Ann Veneman, U.S. Secretary of Agriculture, is a former board of director at Calgene (a subsidiary of Monsanto), and currently serves on the UC Davis College of Agricultural and Environmental Sciences Dean's Advisory Council, the Advisory Council for the U.C. Berkeley College of Natural Resources.

University of Florida: In 1999 the Vasil-Monsanto Endowed Professorship was established at UF in honour of Indra Vasil. Vasil is a graduate research professor emeritus with UF's Institute of Food and Agricultural Sciences. He is a staunch proponent of biotech and deregulation. In response to the opposition to GE crops/foods he stated "*The biotechnology community - which includes academia, industry and the regulatory agencies - has been patient and on the defensive for too long...It is time now to shift the debate from unnecessary regulation to deregulation.*"³³ Vasil has developed a GE wheat variety designed to produce higher levels of gluten, which has been field-tested in Arizona.³⁴ Approximately 50 field trials of Monsanto's GE crops have been run through UF.³⁵ Monsanto also funded research at UF on its rBGH product Posilac. Researchers working under this funding withheld information from a Florida dairy farmer whose herds became sick after starting rBGH treatment that other dairy herds were suffering similar problems.³⁶

University of Manitoba: in 1999 it was announced that Monsanto would establish its \$10 million Crop Technology Centre on U of M's Fort Garry campus. The government of Manitoba

would provide \$1 million. The Centre was being established to build on work between Monsanto and Agriculture and Agri-Food Canada's (AAFC) Cereal Research Centre at the U of M.³⁷ In 2003, open air field trials of Monsanto's Roundup Ready wheat took place at AAFC's Cereal Research Centre on the University of Manitoba campus. (Roundup Ready wheat was being developed in collaboration with AAFC. AAFC paid for many of the development costs).

University of Missouri at Columbia (MU) – Monsanto and the Monsanto Fund have donated \$1.9 million for equipment at the Life Sciences Center, planned to open in August 2003 at MU. Construction began in December 2001 after MU received commitments for the \$60 million required for the project. Much of the funding is coming from the federal government and state governments. The National Aeronautics and Space Administration provided \$29 million, the U.S. Department of Health and Human Services provided \$1 million, while the state of Missouri provided just over \$30 million. The auditorium at the Life Sciences Center will be named after Monsanto. Monsanto has also funded the Monsanto Swine Genome Project (bioinformatics project) at MU. The project also received funding from the National Institutes of Health. It focuses on basic research in animal genomics with the ultimate goal to identify economically superior animals, improve quality, efficiency and profitability of animal production.

University of Nebraska: Michael Fromm, current director and agronomy professor at the university's Center for Biotechnology led a group at Monsanto that developed RR corn and Bt corn.

University of Pennsylvania: School of Medicine's Center for Bioethics received funding from Monsanto (along with Dow and DuPont) to create a report called 'Developing an Ethics Code for the Biotech Industry.' (See www.med.upenn.edu/bioethic/research.shtml).

University of Richmond, Virginia: has a research collaboration with Monsanto. Research team led by Dr. Steve Slater from Cereon Genomics, a subsidiary of Monsanto based in Cambridge, MA, collaborated with Dr. Brad Goodner and his research team from the university of Richmond. The team was working on figuring out the genome sequence for *Agrobacterium tumefaciens*, which can naturally transfer DNA to plant cells.

University of Toronto: Dr. Paul Thompson, Professor of Biology and Philosophy sits on Monsanto's Biotechnology Advisory Council.

University of Washington: Monsanto owns a draft sequence of the rice genome. Research was conducted at the University of Washington under a major contract financed by Monsanto. The rice genome is significant for Monsanto since rice is known as an ideal species for learning about the traits (e.g. yield, disease resistance, etc.) of all grass plants, including wheat and corn. Monsanto has agreed to provide access to its information on the rice genome to member countries of the International Rice Genome Sequencing Project (IRGSP). Member countries include Japan, U.S., China, Taiwan, Korea, India, Thailand, France, Brazil, and the United Kingdom. IRGSP was established in 1997 to gather information about the rice genome.

Washington University: Monsanto has a long-standing relationship with Washington University, focusing on biomedical research. Monsanto has contributed more than \$100 million of research funding towards the Biomedical Research Agreement. The Monsanto Lab was established at the University in 1965. It was the first building on the Hilltop Campus to be named after a corporation. (www.wustl.edu/tour/hilltop/monsanto.html)

Washington University, Saint Louis University, University of Missouri-St. Louis, and Southern Illinois University at Edwardsville: Missouri Botanical Garden (MBG) offers a graduate studies program in systematic botany in cooperation with Washington University, Saint Louis University, University of Missouri-St. Louis, and Southern Illinois University

at Edwardsville. MBG's research division is the Monsanto Center, which includes a herbarium containing over 5 million plant specimens and a research library. It has a staff of more than 150 research scientists, associates and graduate students. It is a facility worth \$19 million and covers 78,000 square feet. MBG botanists and collaborators collect and 124,000 new plant specimens from nearly every continent to the herbarium annually. Monsanto provided \$3,000,000 to the development of the building. The Monsanto Center conducts basic research that is geared for serving the biotech industry.

The International Service for the Acquisition of Ag Biotech

The ISAAA is a group established specifically to promote biotechnology and create partnerships between research institutes in the South and companies of the North³⁸. The ISAAA operates in twelve countries: Kenya; Egypt; Zimbabwe; Indonesia; Malaysia; the Philippines; Thailand; Argentina; Brazil; Costa Rica; and Mexico.³⁹ ISAAA is financed by such corporations as Bayer, DuPont, Monsanto, Syngenta, as well as institutions like the World Bank, the Rockefeller Foundation (two of whom's board of trustees are with the World Bank) and the United States Agency for International Development (USAID). Monsanto has partnerships with institutions in Kenya, Mexico and Thailand through ISAAA:

Kenya: Monsanto, the Kenya Agricultural Research Institute (KARI), USAID's Agricultural Biotechnology Support Project (led by Michigan State University) and ISAAA were working together to develop GE sweet potatoes resistant to the sweet potato feathery mottle virus. (Monsanto has also contributed roughly \$2 million towards the development of GE virus resistant sweet potato at the University of Missouri).⁴⁰ However, trials to develop the GE sweet potato have failed. This has confirmed concerns that GE technologies may not be replicated in Africa with similar results. The initial genetic engineering work was done at Monsanto labs and then donated to KARI, royalty free. According to KARI's findings, the GE crop did not effectively protect against virus challenges in the field. KARI's results corresponded with an earlier study released by Third World Network Africa, entitled "Genetically Modified Crops and Sustainable Poverty Alleviation in Sub-Saharan Africa: An Assessment of Current Evidence."⁴¹

Mexico: In 1991, ISAAA facilitated a partnership between Monsanto and the Mexican government's Center for Advanced Studies (CINVESTAV) located in Irapuato for the development of GE virus resistant potatoes using local varieties. The Rockefeller Foundation is the main funder for this project. Two CINVESTAV scientists have worked with Monsanto to learn how to genetically engineer virus resistance in local potato varieties. Monsanto has granted CINVESTAV rights to use its virus resistant technology in certain varieties of potatoes. The research phases of this project are complete and CINVESTAV is now working on getting the GE potato varieties approved and distributed.

Thailand: Monsanto, along with Syngenta, is funding GE papaya research, including field trials, in Thailand. In March 1998, ISAAA established the Papaya Biotechnology Regional Network for Southeast Asia for the purpose of developing GE papaya in Thailand, Malaysia, the Philippines, Vietnam and Indonesia. Monsanto and Syngenta provided funding for the Network. Other members of the Network include the National Center of Genetic Engineering and Biotechnology (BIOTEC), PGEU and Kasetsart University in Thailand and MARD in Malaysia. ISAAA plans to work out commercial licensing arrangements should GE papaya varieties make to the commercialization stage.

CHEMICAL CONTAMINATION

PCB contamination

Between the mid-1930s and early 1970s more than 100 million pounds of PCBs from a Monsanto chemical plant (Monsanto's chemical business, not including its agrochemicals, was divested as Solutia in 1997) were discharged directly into waterways and soils in Calhoun county Alabama. As a result, residents of Anniston have and continue to suffer from cancer, neurological problems, liver problems, skin disorders, learning disabilities and cerebral palsy. Documents show that Monsanto was dumping PCB waste at the time, sometimes more than 110 kg per day into two large unlined landfill sites near residents' homes. The nearby neighbourhoods have historically been low-income and predominantly inhabited by African Americans. The US EPA ignored the problem.

Monsanto knew as early as the 1950s that PCBs were toxic, but hid the evidence from residents. In 1970, Monsanto offered to buy hogs from local resident Ruth Mims. Mims's hogs, unbeknownst to her at the time, had tested 90,000 times the legal limit for PCBs. In her testimony to a jury she said she used to eat the hogs. Many of her neighbours also fished in the area's two creeks which were contaminated with PCBs, lead and mercury. Monsanto knew these creeks were toxic since 1966 when a scientist hired by the company put 25 healthy fish into Snow Creek and watched them all die within 4 minutes.

Several lawsuits representing thousands of plaintiffs have been filed against Monsanto. In August 2003, Solutia and Monsanto agreed to pay a combined \$600 million to settle claims over PCB contamination made by about 20,000 Alabama residents. It is said that the settlement is likely to ease Wall Street's concerns about Monsanto. Solutia has spent over \$50 million cleaning a plant and surrounding area in Anniston.

Agent Orange in Vietnam

From 1962 to 1970, the U.S. military sprayed 72 million litres of herbicides, mostly Agent Orange, in Vietnam. Monsanto was a major producer of Agent Orange, which is a lethal herbicide that the U.S. used as a defoliant in Vietnam as part of the U.S. military strategy. More than one million Vietnamese were exposed and over 100,000 Americans and allied troops. U.S. and Vietnamese soldiers continue to suffer from effects of Agent Orange. Depression is a major side effect, which has led to attempted suicide in some victims, while memory lapse is another. U.S. veterans sued Monsanto after the end of the war on Vietnam. As a result, in an out of court settlement, Monsanto paid approximately \$80 million in damages to some veterans. Vietnamese veterans and victims have received nothing.

In 1969 the US National Institutes of Health reported that Agent Orange causes malformations and stillbirths in mice. In 1970, the use of Agent Orange was suspended around lakes, recreation areas, homes and crops intended for human consumption. In 1978 the EPA suspended spraying Agent Orange in national forests due to increases in miscarriages in women living near forests that had been sprayed.

Roundup in Colombia

Roundup has been used to destroy drug crops in Colombia since 1978. The U.S. government has bought Roundup from Monsanto and supplied it to Colombia's military-backed government, in

their efforts to destroy drug crops in the country. In 2000 alone approximately 145,750 gallons of Roundup were sprayed over 53,000 hectares in Colombia.

The military anti-drug/neoliberalization campaign known as Plan Colombia – a \$7.5 billion campaign established in 1999 that aims to cut Colombian drug production by half in six years – continues to use Roundup. The U.S. backs this campaign, providing \$1.3 billion in ‘aid.’ The Colombian army began aerial spraying – that is spraying from airplanes and helicopters – of Roundup in 2001, which are destroying coca and food crops.

The sprayings have been non-selective and have fallen onto towns and farmhouses, causing people to suffer fevers and deaths of cows and fish. Farmers have lost hundreds of hectares of food crops.⁴²

Child Labour in India

17,000 children (mostly between the ages of 6 and 14) work for Monsanto at its Indian subsidiary Mahyco in cottonseed production. They work ten to thirteen hours per day, receive no education, earn less than 20 Rs. (USD 0.42) per day and are exposed to toxic pesticides like Endosulphan.

Cottonseed production in India is notorious for involving exploitative child labour, largely because cottonseed companies set a low unilaterally fixed price at which they buy, forcing farmers to seek out cheap labour. Unilever, Syngenta and ProAgro also use the same exploitative measures in their cottonseed production in India. About 90 percent of the children employed in cottonseed farms are in debt bondage, that is they are recruited by the farmers on long-term contract basis by giving loans/advances to their parents. The majority of seed farmers belong to upper castes, while the families or working children are mostly (about 87 percent) from lower castes.⁴³

CAMPAIGNS AGAINST MONSANTO

Boycott Monsanto, Resistance and Solidarity Against Agrochemical TNCs

(RESIST!), The Philippines: RESIST! is the broadest and largest anti-GE alliance in the Philippines. It includes Philippine-based farmers' organizations, non-governmental organizations (NGOs), scientists, health workers, and academics. In June 2003 RESIST! launched a national boycott campaign against Monsanto. The campaign, announced at a press conference in Quezon City, coincided with the release of "*Selling Food, Health, Hope: The Real Story Behind Monsanto Corporation*." It is an in-depth report on Monsanto by University of Washington, PhD candidate and MASIPAG* researcher/writer Sarah Wright. The campaign calls for farmers to boycott: Roundup herbicides; Harness herbicides (corn); Machete herbicides (rice); Asgrow seeds; DEKALB seeds; Hartz seeds; Yieldgard corn; Bollgard cotton; Ingard corn and Roundup Ready corn. Dr. Giovanni Tapang, President of Advocates of Science and Technology for the People and RESIST Convenor said, "We are urging farmers, scientists, environmentalists and individuals to join us in our struggle against Monsanto and agrochemical TNCs (transnational corporations). Monsanto must answer and pay for its criminal and civil liabilities against the peoples of the world." RESIST!, which is the Philippine counterpart of the International Alliance Against Agrochemical TNCs, has also announced that an international campaign against Monsanto is being planned.

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Class action lawsuit against Monsanto and Bayer, Saskatchewan Organic

Directorate, Canada: The Saskatchewan Organic Directorate (SOD), through its Organic Agriculture Protection Fund, has launched a class action lawsuit against Monsanto and Bayer (previously Aventis CropScience) on behalf of over 1,000 of the province's organic canola farmers. The lawsuit is being filed because Monsanto and Bayer CropScience's GE canola has polluted organic farmers' fields. As a result of the pollution it is impossible for the farmers to grow certified organic canola. The preliminary economic analysis by SOD shows that losses caused by the introduction of GE canola could be well over \$14 million. The farmers are seeking compensation from the two corporations and also want an injunction to prevent Monsanto from getting approval in Canada for its GE wheat. Wheat is an even larger market than canola for Canadian farmers and many of the 70 countries to which Canada exports wheat have already stated that they will refuse Roundup Ready wheat or any other wheat that has been contaminated by GE wheat. According to a study from the University of Saskatchewan (a key institution in the development of agro biotech in Canada) growing GE wheat could cost Canadian farmers \$185 million per year in lost sales⁴⁴. The Canadian Wheat Board, Canada's biggest wheat exporter with annual sales between \$4 and 6 billion, has urged the government to create new rules allowing government to reject GE wheat even if it is considered safe for the environment and for animal and human consumption.⁴⁵ SOD believes that if GE wheat were introduced, Saskatchewan organic farmers would not be able to stay in business. SOD is seeking financial support for its lawsuit.

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* MASIPAG (*Magsasaka at Sayantipiko Para sa Ikaunlad ng Agham Pang-agrikultura*) is a proponent of organic agriculture in the Philippines and national network of farmers, scientists, and NGOs.

Invasion of Monsanto farms, Landless Workers' Movement (MST - Movimento dos Trabalhadores Rurais Sem Terra), Brazil: MST is the largest social movement in Latin America involving hundreds of thousands of peasants. MST responds to the struggles of landless peasants through education and action. The MST has created 60 food cooperatives and small agricultural industries, established a literacy program involving 600 educators who work with adults and adolescents, and monitors 1,000 primary schools in their settlements (this includes 2,000 teachers working with approximately 50,000 children). MST is perhaps best known for its takeover of unused land. Presently over 250,000 families have won land titles to over 15 million acres as a result of MST land takeovers. Members of the MST have invaded three farms owned by Monsanto in Brazil in 2003. In June 2003, as many as 2,000 people invaded a 307-hectare farm in Santa Helena de Goias. The MST believes the centre is used to grow and stockpile Monsanto seeds, ready to flood the market upon legalization of GE in Brazil. "It's an illegal centre," said one MST leader, Luiz Afonso Arantes. "They might be producing seeds just for research, but they are also planting with the intention of reproducing," *Agencia Folha* (a Brazilian news agency) quoted him as saying. The MST has expressed fears that legalization of GE in Brazil will mean that big growers will force small farmers out of business. The MST encourages involvement and support for its movement through financial donations, assistance in making background information and current news about the MST accessible for the English speaking public and network building in order to respond to the highest priority political and human rights requests.

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Operation Cremate Monsanto, Karnataka State Farmers' Association (KRRS, Karnataka Rajya Ryota Sangha): KRRS includes approximately 10 million members. It aims for social change at all levels and believes that the autonomy and freedom of the village should be based on the autonomy and freedom of its individual members. In 1998, KRRS launched the 'Operation Cremate Monsanto' campaign. It has spread throughout grassroots groups in India. As part of the campaign, Monsanto test fields have been torn up and burned in different states (including Karnataka and Andhra Pradesh). In September 2003, more than 40 farmers damaged parts of Monsanto's former Bangalore facility, which was located in India's top science facility, the Indian Institute of Science. Protestors were demanding that Monsanto close down its operations in India. 15 farmers were arrested after the action. Professor MD Nanjundaswamy, a leader in KRRS, told reporters that the attack was a warning to Monsanto to leave India.

KRRS

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Monsanto Quit India: launched in 1998, symbolically on the 9th of August – the anniversary of the day that Gandhi told the British to ‘Quit India.’ The campaign was backed by a coalition of non-governmental organizations (NGOs), including the Research Foundation for Science, Technology and Ecology. It was launched in response to Monsanto’s purchase of Mahyco, the largest Indian seed company, the takeover by Monsanto of a lab in India’s premier research institute, the Indian Institute of Science in Bangalore, the free import of GE soybeans into India and the illegal field testing of Monsanto’s Bollgard cotton. Thousands of postcards were distributed to NGOs, community groups and farmers across India. Within four months of the campaign launch, more than 10,000 people signed and sent the postcards to Monsanto’s headquarters in St. Louis, Missouri.

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Appeal of judgement, Percy Schmeiser, Saskatchewan Canada: In 1998, Monsanto filed a lawsuit against Saskatchewan farmer Percy Schmeiser, alleging that he grew RR canola without a license. Monsanto wanted Schmeiser to pay the corporation the same fee required of those growing GE crops under contract. Schmeiser refused, saying that his crops must have become contaminated from GE canola grown nearby. In September 2002, the Federal Court ruled that Schmeiser did violate Monsanto’s patent on its GE canola seeds. Schmeiser fought the court’s ruling. In May 2003, Schmeiser and his lawyers were granted the right to appeal were allowed to take their appeal to the Supreme Court. Schmeiser insists he never deliberately planted Monsanto seeds and says that seeds can fly for miles, as far as from North Dakota to northern Saskatchewan. The Federal Court did not disagree that the Monsanto’s seeds may have blown onto Schmeiser’s property, but said it was Schmeiser’s obligation to destroy the seeds. Mr Schmeiser’s lawyers have argued in the Supreme Court that companies have no right to patent an entire plant. A coalition of NGOs, led by the Council of Canadians, and including the Sierra Club of Canada, Canada’s National Farmers’ Union, the Action Group on Erosion, Technology and Concentration, the International Center for Technology Assessment (Washington, DC) and the Research Foundation for Science, Technology and Ecology (New Delhi, India) applied to intervene in Schmeiser’s case. The outcome of the case could have major implications not just for GE crops, but also for the patenting of genetic techniques in many other areas. Schmeiser is seeking financial support for his case. Funds can be sent to: "Fight Genetically Altered Food Fund Inc." Box 3743, Humboldt SK Canada S0K 2A0 or visit: www.percyschmeiser.com for more information on his case and how to donate online

Antitrust Case Against Monsanto, U.S. Farmers: In 1999, a suit was filed on behalf of two US farmers that alleges that Monsanto, Bayer, Syngenta and Pioneer, formed a cartel to control the prices of new GE soybean and corn seeds. The legal consortium that filed the suit is headed by, Cohen, Milstein, Hausfeld and Toll, a New York law firm. The consortium has been working with environment and development groups, including the National Family Farm Coalition and the Foundation on Economic Trends. The companies have denied the charges. The farmers argue that they have lost revenue because European countries rejected Monsanto’s GE products and boycotted all US corn and soy as a result. Judge Sippel dismissed that claim, but is allowing the antitrust portion of the case to proceed. In response to Sippel’s ruling, the Farmer-to-Farmer Campaign on Genetic Engineering and the National Family Farm Coalition stated that they are pleased with the Court’s decision to proceed to trial on the Plaintiff’s claims alleging antitrust violations against Monsanto and the other corporations. However, they are disappointed with the portion of the decision that dismissed claims relating to the economic injury to farmers caused by

GE crops. They state that GE crops have resulted in lower yields, higher costs of production and loss of markets and farmers should receive compensation for the economic harm they have suffered as a result.

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