

SELLING
FOOD.HEALTH.HOPE™:
the real story behind
Monsanto Corporation

M A S I P A G
Magsasaka at Siyentipiko para sa
Pag-unlad ng Agrikultura

with

R E S I S T
Resistance and Solidarity against
Agrochemical TNCs
and
P R E S S U R E P O I N T

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SELLING FOOD.HEALTH.HOPE™: the real story behind Monsanto Corporation

Introduction

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. Welcome to Monsanto's world, the world that Monsanto is creating right now and that will be ours if we don't stand up and stop it.

This report brings together information about Monsanto, a major agrochemical corporation selling itself as a clean and green, trustworthy company that holds the key to our future food supply. The report shows that Monsanto is not worthy of trust, that it has lied, misrepresented facts, poisoned people and the earth, and put profit before its workers, consumers, farmers, children and communities time and time again.

Monsanto's chemicals have caused cancers, birth defects and other forms of health problems. The people of Vietnam and Colombia have suffered hundreds of thousands of tons of toxic chemicals sprayed upon them from the sky. Monsanto has covered up its operations, and continued poisoning people and land in the more than 60 countries in which it operates. The corporation has been found guilty of "behavior so outrageous in character and extreme in degree as to go beyond all possible bounds of decency so as to be regarded as atrocious and utterly intolerable in civilized society" in U.S. Courts. It happily sells pesticides in the Philippines that have been banned in the U.S. due to their toxicity to humans.

This is the company that is now in danger of controlling our food system. This is the company whose reports the Philippine government is trusting to supposedly show the safety of GMOs.

Monsanto writes laws, bullies countries, and places its executives in the highest places of the most powerful government on earth. It is trying to control the whole food chain and create a system that will hold farmers, consumers and the environment to ransom.

Yet our whole world is not for sale.

Peoples' movements everywhere are standing up to Monsanto and are demanding that the needs of people, of communities and the environment are put before the needs of greedy corporations, which have become all too powerful. They promote their own needs and the needs of the richest people in the richest countries. The system has to change. Profit-driven corporations must not be allowed to own life itself.

Who is Monsanto?

Monsanto is one of the world's largest multinational agrochemical companies. It is best known for aggressively promoting genetically engineered seeds and biotechnology. Genetic engineering has been associated with major risks to the environment, to human health, and with the corporate control over farming systems and life itself. What is less known about Monsanto is its shameful history of polluting towns and rivers, and creating toxic chemicals including the notorious Agent Orange used in the Vietnam war.



Monsanto's official logo "Imagine" is meant to convey an innovative approach to agriculture. Instead, the logo conjures the image of a nightmare future brought by Monsanto

Monsanto was formed in 1901 in St. Louis, Missouri in the U.S., making saccharin for the U.S. market. From this beginning Monsanto has grown to a massive company with over \$4.5 billion in sales in 2002 alone. Of these sales, 40% came from Roundup and other *glyphosate* products and 34% from seed and genomics. Monsanto has operations in more than 60 countries. It has major chemical manufacturing facilities in Argentina, Belgium, Brazil, and the U.S., and land parcels, manufacturing and agricultural facilities in

Africa, Asia, Australia, Europe, North America, and South America¹.

In 2002, Monsanto became a pure biotechnology and herbicide company staking its future on this dangerous technology. Monsanto merged with Pharmacia & Upjohn in 2000, to become Pharmacia corporation; and the group sold off NutraSweet, Equal, and Canderel sweeteners. The massive resistance against GMOs however, has put Monsanto in a very vulnerable position. In 2002, the company lost \$1,693 million and two Monsanto chief executive officers have been replaced in the last few years. The company's stock fell nearly 50% in 2002². In April 2002, Monsanto announced 700 job cuts primarily in Southeast Asia, New Zealand, Australia and North America.

In 2003, continuing controversy over GMOs, especially on its new genetically engineered wheat, its failure to find a new CEO, and an antitrust lawsuit which alleges Monsanto was involved in price fixing over the basic ingredient of the company's top-selling Roundup weed killer, have made its shares drop even further³. In fact, Innovest Strategic Value Advisors concluded not only that Monsanto should receive the lowest possible environmental and strategic management rating, but that investors should be greatly concerned about sustained market rejection, regulatory restrictions in key markets and likely contamination scandals⁴.

Over the past few years, Monsanto has spent billions of dollars purchasing parts of at least a dozen other biotech companies and gaining control of strategic research patents. It has also been involved in major efforts to buy up smaller seed companies from all around the world. This increases the world's reliance on just a few companies that are in control of our basic sources of life.

In 1996, Monsanto bought the biotechnology assets of Agracetus, a subsidiary of W. R. Grace, for \$150 million, and Calgene, a California-based plant biotechnology company for \$340 million. In 1997, Monsanto acquired Holden seeds, the Brazilian seed company, Sementes Agrocerus and Asgrow. In 1998, it purchased Cargill's seed operations for \$1.4 billion, the wheat-breeding business of Unilever (UK) and Dekalb for \$2.3 billion. This puts farmers in a position where, if they want to buy seeds, they have little choice but to buy from Monsanto⁵.

In India, Monsanto has bought a substantial part of MAHYCO, Maharashtra Hybrid Company, EID Parry and Rallis. Mr. Jack Kennedy of

Monsanto has said, “we propose to penetrate the Indian agricultural sector in a big way. MAHYCO is a good vehicle.” According to Mr. Robert Farley of Monsanto, “what you are seeing is not just a consolidation of seed companies, it’s really a consolidation of the entire food chain.”⁶

The company now produces genetically engineered cotton, corn, soybean, and canola seeds. It also produces Asgrow, Hartz, and DEKALB seeds and the herbicides Roundup and Machete (banned in the U.S. but used but farmers in the Philippines and elsewhere in the Third World). Roundup ready seeds produce plants that are genetically engineered to resist larger applications of Roundup herbicide. Monsanto brand names include Advance, Avadex, Bollgard, Enviro-Chem, Harness, Holden’s, Hybritech, Lasso, Latitude, MaisGard, Maverick, NewLeaf, and YieldGard⁷. In the Philippines, these include the seed brands Cargill, Dekalb, and Asgrow; and agro-chemicals such as Roundup, Harness Xtra, Advance, Machete, Power, and Maverick.

Monsanto’s patent on Roundup, by far its biggest selling product and the world’s most used herbicide, expired in late 2000. As a result, generic brands have become available and the company has lost sales to competing products. In response, Monsanto has lowered prices, further affecting its profitability.

By developing genetically engineered seeds tolerant to Roundup, Monsanto is ensuring an ongoing demand for its product. This allows Monsanto to sell more of its chemicals and increase its profits. Adapting plants to chemical poisons is a dangerous step. Not only is Monsanto dabbling in genetic engineering but they are manipulating plants to ensure that more herbicides and chemicals will be used in farming. They can manipulate one crop to make it more adaptable to poisons - but farmers, farming families, consumers and the environment will be more vulnerable than ever.

Monsanto’s efforts to increase profits translate into an increase in the amount of money farmers need to outlay in order to sow and harvest their crops. Monsanto boasts that they have been able to dramatically increase their share of grower purchases in the U.S. from 8% of all grower input costs in soybean production to 52%, from 10 to 45% in cotton, and from 7 to 19% in corn in just a few years. Monsanto’s contribution to farmer input costs include seeds, genetically engineered traits, herbicides and insecticides⁸.

This report will start with exposing some of the secrets that Monsanto

is hiding from the public. It will uncover Monsanto's history of profiteering from poisons, the secrets of its misleading and dirty science, important political connections that it has made, and its new and dangerous forays into the world of genetic engineering.

Monsanto's record shows that it is a company that cannot be trusted. It has poisoned communities and ecosystems, created poisons to be sprayed from the sky in times of war, and pumped millions of pounds of chemicals into rivers and streams. This is the corporation that is now trying to gain control over our food system.



Boycotts, restrictions, and consumer distaste have hit Monsanto hard

Skeletons in the closet

Raining death

Agent Orange

Agent Orange is a lethal herbicide used as a defoliant in the Vietnam War. Monsanto was a major producer of Agent Orange herbicides in the 1950s and 1960s. From 1962 to 1970, the U.S. military sprayed 72 million liters of herbicides, mostly Agent Orange, in order to defoliate Vietnam during the U.S. war with the aim of killing vegetation so that there was no place for Vietnamese to hide in the forests. But in addition to killing vegetation, Agent Orange has poisoned hundreds of thousands of people⁹.

Agent Orange was shown to have very serious toxic effects. According to the 1994 "Seventh Annual Report on Carcinogens", Agent Orange causes "toxic effects in animals includ[ing]... vascular lesions, chloracne, teratogenicity, fetotoxicity, impaired reproductive performance, endometriosis and delayed death". Studies have linked exposure to this herbicide to a range of cancers. Over one million Vietnamese were exposed to the spraying, as well as over 100,000 Americans and allied troops. The application of Agent Orange and TCDD caused more than 50,000 birth defects and tens of

thousands of cancers in Vietnamese civilians and soldiers. U.S. veterans and Vietnamese soldiers and civilians are still suffering the effects of its use today, and their children have higher rates of birth defects such as spina bifida¹⁰.

After the end of the Vietnam war, it was shown that Monsanto knew about the toxicity of the chemical and had tried to cover it up. Monsanto workers had regularly complained about skin rashes, joint and limb pain, after being exposed. After the end of the war, U.S. veterans sued Monsanto and the company settled out of court, paying about \$80 million in damages. Monsanto's Vietnamese victims received nothing.

Colombians bombed with Monsanto's chemicals¹¹

Unfortunately, there are still cases of Monsanto's poisons raining down from the sky to contaminate people and land. Colombia has been subject to major operations by the U.S. military in an attempt to wipe out its coca crop. Coca is sacred to indigenous people in the Andes but it is also used in making cocaine. In trying to eradicate this crop, the U.S. has sprayed tons of Roundup and Roundup Ultra from airplanes. Roundup is produced by Monsanto.

Colombian farmers and indigenous people have suffered major health complaints, including burning eyes, dizziness and respiratory problems. Their crops and livestock have been poisoned, and their environment has been polluted by the mass application of chemicals.

In the year 2000, approximately 145,750 gallons of Roundup were sprayed covering an area of 53,000 hectares (205 square miles). Elsa Nivia, a Colombian agronomist who works with the Pesticide Action Network, reports that local authorities counted 4,289 humans suffering skin or gastric disorders in the first two months of 2001. Some 178,377 animals (cattle, horses, pigs, dogs, ducks, hens and fish) were also reported killed by the spraying.

Colombian indigenous leaders have tried in vain to stop the fumigation. "The 12 indigenous peoples have been suffering under this plague as if it were a government decree to exterminate our culture and our very survival," said Jose Francisco Tenonnoa, Colombian indigenous leader.

"Our only sustenance - manioc, banana, palms, sugar cane and corn - have been fumigated. Our sources of water - creeks, rivers, lakes, have been poisoned, killing our fish... Today, hunger is our daily bread. In the name of the Amazonian Indigenous people, I ask that the fumigations be immediately suspended."

Poison for profit

Monsanto is a company that has made its millions producing poisons. This is the very worst of companies, profiteering from death.

PCBs

Monsanto developed and sold PCBs, or *polychlorinated biphenyls*, for decades. From 1935, they were the sole producer of these chemicals in the U.S.. These chemicals are highly toxic organochlorines linked to birth defects, infertility, impaired mental function in children, immune system weakness, and cancer. Although PCBs are now banned and are no longer produced, many dangers still exist and the chemicals can linger in the environment for centuries poisoning water, land and people¹².

Monsanto found guilty

Monsanto was found guilty of “behavior so outrageous in character and extreme in degree as to go beyond all possible bounds of decency so as to be regarded as atrocious and utterly intolerable in civilized society” due to its history of releasing tons of poisonous PCBs into a city in the U.S. and covering it up. The jury held Monsanto and its corporate successors liable on all six counts it considered: negligence, wantonness, suppression of the truth, nuisance, trespass and outrage.

In a major environmental lawsuit, 3500 local residents of the city of Anniston in Alabama took Monsanto to court for poisoning and lying to their community. Monsanto had operated a chemical plant in the city making PCBs. Although the dangers of this chemical were not initially known, the court saw that Monsanto had known about the dangers and covered them up for decades.

For example, in 1966, Monsanto managers discovered that fish put into a local creek, “turned belly-up within 10 seconds, spurting blood and shedding skin as if dropped into boiling water. In 1969, they found a fish in another creek with 7,500 times the legal PCB level. But they never told their neighbors, and concluded that “there is little object in going to expensive extremes in limiting discharges.” Anniston residents did not learn about the pollution until thirty years later in 1996.

At the trial, Monsanto attorneys argued that the company acted “promptly and responsibly” to limit its PCB releases once it learned that the chemicals were poisonous and would remain in nature for centuries. Documents shown at the trial - many of which were labeled

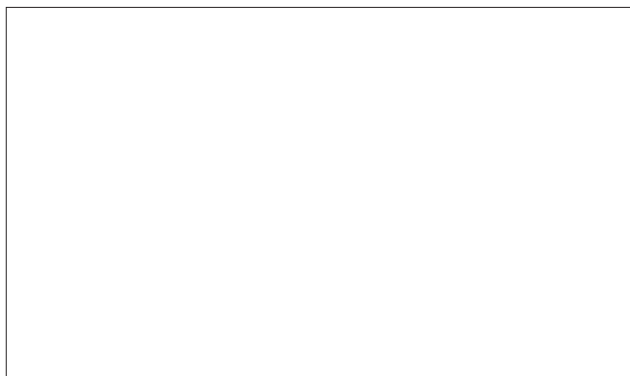
“CONFIDENTIAL: Read and Destroy” - showed these claims to be false. Monsanto was focused on making money and maintaining their monopoly of PCBs completely regardless of any social and environmental risks. “We can’t afford to lose one dollar of business,” one internal memo said.

“They also know that for nearly 40 years, while producing the now-banned industrial coolants known as PCBs at a local factory, Monsanto Co. routinely discharged toxic waste into a west Anniston creek and dumped millions of pounds of PCBs into oozing open-pit landfills. And thousands of pages of Monsanto documents — many emblazoned with warnings such as “CONFIDENTIAL: Read and Destroy” — show that for decades, the corporate giant concealed.”¹³

Machete

Monsanto produces the herbicide Machete (also called *Butachlor*). This herbicide poses both acute and chronic health risks and can contaminate water supplies. The chemical was banned in the U.S.. Its application for registration was rejected by the U.S. EPA in 1984 due to “environmental, residue, fish and wildlife, and toxicological concerns.” A ‘safe’ level of the herbicide as a residue in the food we eat has not been established. Despite these recognized dangers, Monsanto sells the herbicide in Latin America, Asia, and Africa where farmers use the product for rice production often even without minimal protective covering¹⁴.

Genetic uniformity of Monsanto's crops has led to pest infestation and greater susceptibility to disease. This in turns increases the demand for Monsanto's chemicals



Parathion

Monsanto also made the pesticide *methyl parathion*, a poisonous chemical toxic to humans. *Methyl parathion* affects the central nervous system and is one of the leading causes of pesticide poisonings of all time¹⁵.

Dioxins

Dioxins are another type of poisonous chemicals associated with Monsanto. Dioxins are extremely toxic, but Monsanto has been involved in health studies to try to show that the chemical is not dangerous to human health. Dr. Samuel Epstein, Professor of Occupational and Environmental Medicine from the University of Illinois, stated that, “There are numerous... flaws in the Monsanto health studies. Each of these misrepresentations and falsifications served to negate any conclusions of adverse health effects from dioxins.”

Dr. Cate Jenkins, U.S. EPA Regulatory Development Branch, said “There is a clear pattern of fraudulent misconduct in the dioxin science performed by the chemical industry and its indentured academics.”¹⁶

Yet a study by the National Institute of Occupation Health and Safety (NIOSH) of dioxin-exposed Monsanto workers found that they had a statistically significant increase in cancers. The U.S. EPA itself has documented the toxic qualities of dioxin and shown it to be a human carcinogen.

It is clear that Monsanto’s science cannot be trusted¹⁷.

Roundup

Roundup (or *glyphosate*) is Monsanto’s biggest seller. It is a herbicide that Monsanto peddles as being safe. The majority of Monsanto’s genetically engineered products are altered so they can withstand greater doses of this herbicide. This will lead to even more *glyphosate* being sprayed the world over; but Roundup is actually toxic to animals including humans.

Symptoms include eye and skin irritation, headache, nausea, numbness, elevated blood pressure and heart palpitations. Studies of farmers who are exposed over the long time to *glyphosate* products (Roundup) have an increased risk of miscarriages, birth defects, premature birth and neurodevelopmental (attention deficit) disorders¹⁸ A recent study by eminent oncologists Dr. Hardell and Dr. Eriksson of Sweden has also shown clear links between *glyphosate* and non-Hodgkin’s lymphoma, a form of cancer¹⁹.

The chemical is “extremely persistent” - which means that it stays in the environment for a long time without being broken down. It has, for example, been found in streams and soils for months after its last application. An E.U. report recently found that *glyphosate* harms beneficial insects and

spiders. It is toxic to some beneficial soil organisms and increases crops' susceptibility to diseases. In laboratory tests, *glyphosate* increased plants' resistance to disease and reduced the growth of nitrogen-fixing bacteria²⁰.

These issues are particularly worrying - given Monsanto's claim that *glyphosate* is benign and the major increase of Roundup use due to the Roundup Ready crops, as well as its aerial spraying of the poison in Colombia.

In 1998, Monsanto paid a fine of \$225,000 for mislabeling containers of Roundup on 75 separate occasions. The penalty was the largest-ever paid for violation of the Worker Protection Standards of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). In 1997, following complaints by the New York State district attorney, Monsanto altered its ads to delete claims that the herbicide is "environmentally friendly" and "biodegradable."²¹

Pollution in the U.S.

Monsanto is based in the U.S.A. and has its longest history in that country. It is only relatively recently that Monsanto is spreading into other countries and the Third World. Looking at Monsanto's record in the U.S. helps give a picture of how they may act in other countries. If they will pollute, deceive and poison in the U.S.A, it is likely that their behavior away from the stronger U.S. regulatory systems will be even worse.

Monsanto is one of the U.S.' major polluters. It has been identified by the U.S. Environmental Protection Agency as being the "potentially responsible party" for no fewer than 93 major uncontrolled or abandoned hazardous waste sites (known as "Superfund Sites") in the U.S.²².

The Mississippi River is one example that has suffered from Monsanto's pollution. A Monsanto chemical plant in Illinois discharges about 34 million pounds of toxins into the river yearly. The facility is a major producer of *chloronitrobenzenes*, bioaccumulative teratogens detected at levels as high as 1000 parts per billion in fish over 100 miles downstream. Monsanto's plant in Iowa which produces *alachlor*, *butachlor* (Machete) and other highly toxic compounds, and releases at least 265,000 pounds of chemicals per year directly into the Mississippi²³.

Timeline of disaster²⁴

1996 - Monsanto agreed to pay \$50,000 in legal costs and to alter advertising in New York after complaints from the state's attorney general

that advertisements for Monsanto's Roundup brand herbicide were misleading. In their advertisements, Monsanto had claimed that Roundup was safer than table salt and "practically non-toxic" to mammals, birds and fish. New York had been challenging the ads since 1991.

1995 - Monsanto ranked fifth among U.S. corporations on the EPA's toxic release inventory having discharged 37 million pounds of toxic chemicals into the air, land, water and underground.

1992 - Monsanto agreed to pay \$39 million of a \$208 million Superfund settlement with 1700 Houston residents who claimed injuries as a result of living near a former toxic waste dump, labeled one of the worst such sites in Texas. Plaintiffs argued that Monsanto deposited 519 million pounds of hazardous compounds into unlined holes in the ground. Children in the area suffer health problems including immune deficiency disorders, cancer, and facial deformities allegedly due to exposure to toxins leaking from the site.

1991 - The Massachusetts Attorney General's office fined Monsanto \$1 million - the largest ever assessed in Massachusetts for violation of a state environmental law - for illegally discharging 200,000 gallons of acid-laden wastewater from a plant and failing to report the release immediately as well as understating the volume of the release. According to the state's Department of Environmental Protection, Monsanto, which paid a \$35,000 fine in 1988 for failing to report an acid spill at the same facility, had a history of violating spill-reporting laws.

1990 - Monsanto paid \$648,000 to settle charges that it allegedly failed to report significant risk findings from health studies to the EPA as required under the Toxic Substance Control Act.

1988 - Monsanto agreed to a \$1.5 million settlement in a chemical poisoning case filed by over 170 former employees of the company's Nitro, West Virginia facility. Six workers said they had been exposed to chemicals which gave them a rare form of bladder cancer.

1986 - A U.S. District Court found Monsanto liable in the death of a Texas employee from leukemia caused by exposure to the carcinogen *benzene*. The plaintiff's family contended that Monsanto had neglected to monitor *benzene* emissions at the plant and had failed to instruct workers about the risks of handling benzene-tainted compounds. The court awarded the plaintiff's family \$108 million.

1947 - More than 500 people, including 145 Monsanto employees, died in April 1947 when Monsanto's Texas City *styrene* plant burned after a ship containing ammonium nitrate exploded.

Times Beach - a legacy of contamination²⁵.

The town of Times Beach, Missouri, was found to be so thoroughly contaminated with *dioxin* that the U.S. government ordered it evacuated in 1982. Apparently the town, as well as several private landowners, hired a contractor to



Warning sign from times beach, Missouri

spray its dirt roads with waste oil to keep dust down. The same contractor had been hired by local chemical companies to pump out their *dioxin*-contaminated sludge tanks. When 50 horses, other domestic animals, and hundreds of wild birds died in

an indoor arena that had been sprayed with the oil, an investigation ensued that eventually traced the deaths to *dioxin* from the chemical sludge tanks. Two young girls who played in the arena became ill, one of whom was hospitalized for four weeks with severe kidney damage, and many more children born to mothers exposed to the *dioxin*-contaminated oil demonstrated evidence of immune system abnormalities and significant brain dysfunction.

While Monsanto has consistently denied any connection to the Times Beach incident, the St. Louis-based Times Beach Action Group (TBAG) uncovered laboratory reports documenting the presence of large concentrations of PCBs manufactured by Monsanto in contaminated soil samples from the town. "From our point of view, Monsanto is at the heart of the problem here in Missouri," explains TBAG's Steve Taylor. Taylor acknowledges that many questions about Times Beach and other contaminated sites in the region remain unanswered, but cites evidence that close investigations of the sludge sprayed in Times Beach were limited to those sources traceable to companies other than Monsanto.

The cover-up at Times Beach reached the highest levels of the Reagan administration in Washington. The nation's environmental agencies during the Reagan years became notorious for officials' repeated backroom deals

with industry officials, in which favored companies were promised lax enforcement and greatly reduced fines. Reagan's appointed administrator of the Environmental Protection Agency, Anne Gorsuch Burford, was forced to resign after two years in office and her special assistant, Rita Lavelle, was jailed for six months for perjury and obstruction of justice. In one famous incident, the Reagan White House ordered Burford to withhold documents on Times Beach and other contaminated sites in the states of Missouri and Arkansas, citing "executive privilege," and Lavelle was subsequently cited for shredding important documents. An investigative reporter for the *Philadelphia Inquirer* newspaper identified Monsanto as one of the chemical companies whose executives frequently hosted luncheon and dinner meetings with Lavelle. The evacuation sought by residents of Times Beach was delayed until 1982, 11 years after the contamination was first discovered, and 8 years after the cause was identified as *dioxin*.

rBGH

Monsanto was also the developer of the highly controversial recombinant Bovine Growth Hormone (rBGH, also known as BST). This is a hormone that is injected into cows and can increase milk production. This increase in milk comes with many problems. The Cancer Prevention Coalition has reported that milk from rBGH-treated cows contains higher levels of IGF-1, an insulin-like growth factor which may increase the risk of certain cancers. The General Accounting Office has also warned of the potential hazards to human health by consuming products derived from rBGH-treated cows. In January of this year a Harvard study of 15,000 white men published in *SCIENCE* reported that those with elevated—but still normal—levels of IGF-1 in their blood are 4 times as likely as average men to get prostate cancer²⁶.

The hormone also harms the cows. A report by Canadian government scientists says, "Evidence from the animal safety reviews were [sic] not taken into consideration. These studies indicated numerous adverse effects in cows, including birth defects, reproductive disorders, higher incidence of mastitis [infection leading to inflammation of the udder], which may have had an impact on human health."²⁷

Rather than try to address some of these problems, Monsanto employed its bullying tactics to force farmers to use the hormone and have tried to stop suppliers letting consumers know that there is the genetically engineered

hormone in their milk. Food companies which marked their products as rBGH-free have been threatened and sued by Monsanto. For example, Monsanto brought an action against the Pure Milk and Ice Cream Company in Texas to try to force them to withdraw their labels.

In a documentary produced by award-winning reporters Steve Wilson and Jane Akre, Canadian government officials, speaking on camera, said they believed Monsanto tried to bribe them with offers of \$1 to \$2 million to gain approval for rBGH in Canada. Monsanto officials claimed that the Canadians misunderstood their offer of “research” funds.²⁸

In 1991, the U.S. Food and Drug Administration (FDA) said the company’s materials on rBGH “go beyond the legitimate exchange of scientific information” and ordered Monsanto to stop making unsubstantiated claims about rBGH²⁹. In 1998, the FDA admitted that it had allowed the sale of the hormone without having seen any safety data. It had relied instead on a summary provided by Monsanto³⁰.

Biotechnology

Monsanto is one of the world’s most rabid promoters of genetically engineered foods. Genetically engineered organisms or GMOs have been widely dismissed as being unsafe, environmentally damaging and associated with increased corporate control over our food and farming. Their use has been rejected or constrained in many countries including in the European Union, Japan and Brazil and markets are closing everywhere to genetically engineered crops. Despite these problems, Monsanto is doing all it can to bring new genetically engineered crops into the market. For them, it is a matter of profit, not of sustainability or life.

There has been wide condemnation by farmers, scientists and peoples’ movements throughout the world. More than 24 African agriculturists and environmental scientists representing their countries at the UN issued a statement condemning Monsanto for its tactics and its untrue and unproven claims regarding genetically engineered foods³¹. The statement was signed by the FAO (Food and Agriculture Organization) representative of every African country apart from South Africa.

“[We] strongly object that the image of the poor and hungry from our countries is being used by giant multinational corporations to push a

technology that is neither safe, environmentally friendly, nor economically beneficial to us” ... “We do not believe that such companies or gene technologies will help our farmers to produce the food that is needed in the 21st century. On the contrary, we think it will destroy the diversity, the local knowledge and the sustainable agricultural systems that our farmers have developed for millennia and that it will thus undermine our capacity to feed ourselves,” the statement said.

The African statement particularly condemns terminator technology which alters seeds so that they no longer reproduce. For four years none of these African nations accepted GM food or crops. The situation is no better for Monsanto in other parts of the Global South³².

Prof. Wangari Mathai from the Green Belt Movement in Kenya says, “History has many records of crimes against humanity, which were also justified by dominant commercial interests and governments of the day. Despite protests from citizens, social justice for the common good was eroded in favor of private profits. Today, patenting of life forms and the genetic engineering which it stimulates, is being justified on the grounds that it will benefit society, especially the poor, by providing better and more food and medicine. But in fact, by monopolizing the ‘raw’ biological materials, the development of other options is deliberately blocked. Farmers therefore, become totally dependent on the corporations for seeds.”

Other scientists such as Dr. Vandana Shiva in India also condemn the technology and point out that it will be very detrimental to Third World Farmers. Dr. Shiva says, “Monsanto’s technologies are not environment friendly, or sustainable. They pose a threat to ecosystems and agriculture. Monsanto’s technologies will push Bangladeshi peasants into debt as they have to spend more money on herbicides, seeds, royalties and technology fees. This rising indebtedness of farmers is intrinsic to industrial agriculture and is the reason why only 2 per cent farmers survive in the U.S. and thousands of farmers have committed suicide in India.”

It will not benefit the South to allow genetically engineered products to be grown. All over the world, markets are closing to genetically engineered products. The gates to Europe and Japan for GM commodities have all but closed and countries such as New Zealand and Australia are following suit. Canadian canola exports to the E.U. were worth \$180 million in 1996 but

dropped to zero in 1997 because of their inability to isolate genetically engineered varieties and since. U.S. corn exports to the E.U. have, similarly fallen from millions of metric tons to almost zero since GM Bt corn was introduced³³. Engineered soybeans, corn and canola are estimated to have cost the U.S. economy at least \$12 billion since 1999. In these countries some of the losses are covered by the government. In the South the government could not afford to make such subsidies. It would be a disaster³⁴.

Saudi Arabia has already banned 17 GMO-tainted Philippine products including popular children's snacks and meat products³⁵.

The safety of GM food is unproven. On the contrary, there is sufficient scientific evidence to suggest it is unsafe. GM food can potentially give rise to a range of health problems, including: food allergies; chronic toxic effects; infections from bacteria that have developed resistance to antibiotics, rendering these infections untreatable; and possible ailments including cancers, some of which are yet difficult or impossible to predict because of the present state of risk assessment and food safety tests³⁶.

The issue of safety is highlighted by results of UK government-funded research, recently released, showing that GM DNA in food can survive in the gut of human subjects and transfer to gut bacteria³⁷.

The most immediate hazard from such horizontal transfer of GM DNA is the transfer of antibiotic resistance marker genes to pathogenic bacteria, making infections untreatable. Assumptions on alleged GM food safety are based on a limited range of experiments.

Because genetically engineered food remains unlabelled, consumers cannot discriminate between GE and non-GE food, and should serious health problems arise, it will be extremely difficult to trace them to their source. Lack of labeling also helps to shield the corporations that could be potentially responsible from liability.³⁸

The adoption of genetically engineered crops is likely to reduce genetic diversity, resulting in fewer and fewer types of food crops; the narrowing of the genetic base of food adds to the likelihood of pest and disease epidemics. Many of these problems stem from the fact that genetically-engineered crops will be grown in industrial monocultures. Other forms of agriculture offer far safer, proven and ecologically-benign means of protecting crops against pest damage.

Monsanto has produced two main lines of genetically engineered

products: the roundup ready crops and the Bt crops. Both of these have generated a great deal of controversy in every country that they have been sold. Both are being tested for the Philippines. There is also the issue of corporate control, patents on life and social issues associated with all genetically engineered products.

Roundup Ready

Roundup Ready crops are crops that have been genetically engineered to resist greater applications of Roundup pesticide. This is the major kind of genetically engineered crops sold or developed so far including Roundup ready corn,

Monsanto's marketing techniques have raised unrealistic expectations. Farmers may choose to indebt themselves in order to try the products only to find that they cannot meet their costs.

cotton, canola and wheat. Seventy-one percent of all genetically engineered crops planted in 1998 were designed to be resistant to herbicides such as *glyphosate*. Roundup is a poison that kills most plants and is toxic to animals (especially to fish) and to humans. By engineering the crops to be MORE resistant to pesticides, farmers can use greater amounts before killing the plants. This, of course, will mean greater pesticide use and higher incidences of pesticide poisoning wherever Roundup ready plants are used. The United States Department of Agriculture statistics from 1997 show that expanded plantings of Roundup Ready soybeans have resulted in a 72% increase in the use of *glyphosate*. This will also increase the amount of pesticide residue left in food. Monsanto has already received permits for a tripling of herbicide residues on genetically engineered soybeans in Europe and the United States³⁹.

Another major issue with any genetically engineered crops is the issue of cross pollination. This means that, in the normal process of reproduction

of plants, the genes of different plants are shared in the offspring. Unfortunately, where plants are genetically engineered this means the offspring of other plants will be polluted with the genes of the genetically engineered plants. In the case of Roundup ready crops, this could cause superweeds that get the Roundup resistant gene from the crop and then are themselves resistant to pesticides.

Superweeds, in the form of Roundup-tolerant marestails, are now plaguing GM soya and cotton fields in the U.S. U.S. scientists in three states have shown that sunflowers modified with an artificial gene designed to help ward off pests can spread that ability to wild sunflowers. Both established commercial seed stocks and indigenous varieties are now contaminated by GM, with serious consequences for agricultural biodiversity⁴⁰.

It is also difficult to keep organic and non-GE crops free from contamination from nearby genetically engineered crops especially if they are open pollinated. In the Philippines, this means that native and traditional corn varieties planted near Bt-corn can easily be effected. Canadian organic farmers are suing Monsanto for polluting organic canola production in Canada. The farmers, Larry Hoffman and Dale Beaudoin, contend that the GE canola contaminates their organic canola through natural cross-pollination from neighboring fields. As a result, they cannot sell it as organic canola. In fact, so much GE canola is grown in the province that it has put the organic growers out of production, they say. The suit says that Monsanto and Aventis violated environmental laws by not conducting environmental impact assessments before releasing the seeds⁴¹.

The genetically-engineered crops now being cultivated do not have significantly increased yields compared to conventional crops. In some cases, yields are lower than those for conventional varieties of the same crop. In the first large-scale field trials in Puerto Rico in 1992 of Roundup Ready plants, Monsanto scientists found statistically significant reduced yields, averaging some 11.5 per cent, in three of seven trials.

There have been failures throughout the world - wherever genetically engineered crops have been tried. The criticism of GE products is so strong and the number of markets open to GE products so few that Monsanto is having real problems going forward with its latest Roundup Ready crop - Roundup ready wheat. The first genetically engineered crops were approved in the U.S. without much fuss as the public did not have a chance to learn

about the problems with genetically engineered foods. This is now changing.

In early 2003, the U.S. Department of Agriculture (USDA) said it may impose strict requirements on Monsanto to make sure it does not sell genetically engineered wheat if foreign markets do not accept it. Consumers throughout the world are so negative that both domestic and foreign buyers are likely to shun all U.S. wheat if it is sold⁴².

Even if the wheat is approved in the United States, Monsanto has promised not to sell it until at least Canada and Japan accept it. The St. Louis-based company said a secure segregation system must also be in place to ensure the separation of genetically modified and traditional wheat. This is a major recognition of the lack of demand for GE products as consumers refuse to buy and demand not to be force-fed genetically altered products.

Bt (pest resistant)

Bt products including Bt corn and Bt cotton are genetically engineered to produce a Bt (*Bacillus thuringiensis*), a natural insecticide commonly used in organic farming. By inserting this gene, Monsanto has created a plant that is supposed to exude its own pesticide all the time. But it doesn't always work like that.

Wherever the crop has been grown there have been problems. The first case was in the U.S.A. where farmers were promised that genetically engineered cotton would produce poison against caterpillar attack. But the new cotton did not work and in some fields up to 60 percent of the plants were destroyed by caterpillars. The damage for this harvest period was estimated at U.S. \$1 billion⁴³. Farmers received millions of dollars in compensation. Unfortunately this level of compensation may not be available to farmers in the Third World. Like the case of Agent Orange where U.S. citizens were justly awarded millions of dollars in damages, the Vietnamese received nothing, Third World farmers will be hard pressed to be compensated for losses to their harvests, their health and their environments.

In India, farmers who planted genetically engineered cotton seed, are now trying to claim compensation from the government for a disastrous failure of this year's crops. The plants were shown to be unsuited to Indian climatic conditions and pests. The loss in the Vidarbha region at is estimated to be over \$100 million. The state government in Andhra admitted, "Farmers have

not experienced very positive and encouraging results.” The seeds cost 1600 rupees per bag (compared to 400 rupees for hybrids). This has led farmers deeper into debt and with only a poor harvest many are suffering.⁴⁴ In April 2003, India’s regulatory authority, the Genetic Engineering Approval Committee (GEAC), unanimously rejected the proposal for cultivation in North India of a new kind of Bt-cotton developed by Mahyco Seed Company in collaboration with Monsanto⁴⁵.

Instead of acknowledging this problem, Monsanto has cited its own field trials to claim that the cotton has an increase in yield. But these trials were done on test sites in perfect conditions. It contains no data from the farmers fields and clearly is misrepresentative of real-life experience. Such misleading reports can be very detrimental to farmers as they influence policy makers who make pro-GE decisions on unrealistic evidence.

Apart from the crop failures, there is a major concern that insects will become resistant to this common insecticide. Rather than being sprayed with a one-off application, insect larvae eat the plant and are exposed to the Bt toxin over a longer period of time. Some of the larvae are not killed and can become resistant. There have already been reports of pests becoming resistant to the toxin. The active toxin secreted by these plants may also harm beneficial insects like moths and butterflies⁴⁶.

New research, by scientists from the Imperial College London and the Universidad Simon Rodrigues in Caracas, Venezuela, suggests that not only are pests not killed by the plants but they are actually able to eat the poison and use it to grow faster. The larvae eating the leaves grew much faster than those that ate normal plants - up to 56% faster! The finding showed that the presence of the poison “could have modified the nutritional balance in plants.” This is not only alarming in that the pests are thriving but shows the unexpected harmful effects of GM crops including the ways that GE can change the nutritional balance of foods and their toxicity levels. The unexpected effects for human foods are terrifying⁴⁷.

Even Monsanto admits that bt products can lead to pest resistance.. In its patent application in the U.S., Monsanto admits that transgenic pest control “may not be desirable in the long term” because it produces resistant strains and “numerous problems remain... Under actual field conditions.”⁴⁸

Pollen contamination is another potential problem especially with open

pollinated varieties such as corn. Neil Hart, an Agricultural Economist at Iowa State University, has estimated that corn pollen can drift up to five miles. This means that if one farmer is growing GMOs the fields of farmers up to five miles away can be contaminated. In addition to the environmental problems this could have severe economic consequences. Farmers would not be able to claim their corn as GMO free which could ruin organic crops and make traditional hybrid corn worthless for export to countries where consumers are wary of the technology such as Europe and Japan⁴⁹.

A letter from the President of the American Corn Growers Association to the EPA says, “We urge you to seriously reconsider this decision until a comprehensive evaluation is conducted on the negative impacts that Bt varieties are having on markets for U.S. corn. One glaring negative aspect is the extremely low prices that farmers are receiving for corn at the farm level. The major issue of pollen drift and cross-pollination contamination of conventional (non-genetically engineered or non-GMO) corn fields by genetically engineered/GMO corn varieties (Starlink and other varieties) has already caused major global market disruption for U.S. corn growers.”⁵⁰

Patents on life

Monsanto has been a major player advocating for the ability to patent life-forms and also policing laws where they exist. The drive to patent life through the WTO (via TRIPs) can be traced back to Monsanto and the 12 other major corporations who formed the Intellectual Property Committee (IPC). The companies on this committee were successful in getting intellectual

*Bt-corn is being promoted in areas where corn borer is not a problem and despite the existence of native varieties resistant to the pest. This farmer-bred variety from * has been attacked by the corn borer but its corn harvest has not been reduced.*



property rights - or the 'right' to patent life - onto the agenda of the WTO. As a result, countries throughout the world are forced to change their laws on patenting to bring them in line with the needs of rich countries and giant corporations⁵¹.

Monsanto is the holder of some extremely broad and disturbing patents including a patent for the infamous terminator technology (see below). They also hold a patent - European patent Number 301,749 - granting them a monopoly over the development of all forms of genetically engineered soybean varieties and seeds. Regardless of the materials used, the kind of alteration undertaken and the process used. This "species patent" covering all soybeans is a major step to worldwide crop monopoly by one corporation⁵².

In addition to helping create the world-wide pressure to force Southern governments to adopt patent regimes, Monsanto has actively policed those regimes where they already exist. Monsanto, for example, has hired hundreds of private detectives in the U.S. and Canada to track down examples of 'illegal' seed-saving and to threaten farmers who may not even have been using Monsanto's seeds. Monsanto alone has filed 73 suits in court over the past five years. Most of these cases are settled out of court with the company claiming millions of dollars in compensation⁵³. The penalties for this seed saving have included massive fines and prison sentences. They have turned North American farms into police states. If the rest of the world adopts legislation that prohibits seed saving, Monsanto's private detectives will become a global anti-farmer police force.

One well known example is the case of Percy Schmeiser, a Canadian farmer who sued by Monsanto for thousands of dollars because the company's genetically engineered canola plants were found growing on his field, apparently after pollen from modified plants had blown onto his property from nearby farms⁵⁴.

This case is particularly worrying for farmers worldwide as it shows the extent that courts will trample over farmers rights to protect giant corporations. The Canadian Judge in the Schmeiser case said that it did not matter how the plants got into his fields, whether it was by wind, from birds or other natural sources, or if it was intentional. However it got there, Monsanto now owned Percy's plants. Even if it the genes were blown there by the wind, all cross-pollinated plants become the property of Monsanto. So

if a farmer has a conventional plant in his or her field, and pollen from a genetically engineered plant is blown into the field cross-pollinating with the conventional plant, then the seeds and the new plants will belong to Monsanto! It was also decided that it was irrelevant that Percy Schmeiser didn't even use the so-called benefits of the crops. They were Roundup ready seeds, designed to tolerate large amounts of Roundup herbicide but Percy didn't even spray the plants. Percy Schmeiser has appealed the decision which will be heard in Canada's highest court⁵⁵.

The Schmeiser case is the most famous but not the only one. There are scores of examples of Monsanto hiring detectives to find farmers 'guilty' of seed saving. Another example is the Nelson family of North Dakota. Monsanto claims that they saved soybean seed from their 1998 crop and replanted it in 1999. They were stunned when in late July 2000 they received a letter saying Monsanto was suing them. They received this letter too late to collect crop samples to disprove the allegation. This seems to be part of Monsanto's strategy - to wait until it is too late to gather proof⁵⁶.

One farmer from Tennessee who pleaded 'guilty' to saving seed and planning to reuse it is facing five years in prison and/or a \$250,000 fine. Another Tennessee farmer, Kem Ralph, has been sentenced to eight months in prison for lying about a truckload of cotton seed he hid for a friend⁵⁷.

Laws in the Philippines allow for up to 7 years in jail for this 'offense.' In the U.S., it is not the government who goes around and discovers these farmers, it is Monsanto who hires private detectives. This is an approach they could also use in the Philippines rather than rely on the Philippine police force. Talking about their approach to enforcing patents in other countries, a Monsanto spokesman, Gary Barton, says "We're in this for the long haul, and the best we can do is work with local governments to protect our technology."⁵⁸

The whole concept of patents on life is an insult to farmers, and to life itself. Patents confer monopoly rights over life forms for commercial exploitation and imply that seeds and animals can be invented by corporations like Monsanto. Genetic resources and knowledge of their use are mainly located in developing countries and our food crops have been developed by farmers, farming communities and indigenous people throughout millennia. Monsanto has no right to claim that it invented and can own a type of maize, cotton or wheat including the seeds and their future reproduction. Neither do

they have a right to stop farmers saving seeds, exchanging them, selling them or breeding them as they have done for centuries.

Monsanto has also tried to establish its control over another source of life: water. In both India and Mexico where water is at a premium, Monsanto has been looking into turning an ecological crisis into a profit-making venture. Monsanto had plans to earn revenues of \$420 million and a net income of \$63 million by 2008 from its water business in India and Mexico. By 2010, about 2.5 billion people in the world are projected to lack access to safe drinking water and Monsanto wants to make money off it. In their thinking, a world wide water crisis is a billion dollar market.⁵⁹

Argentina

Prior to its economic collapse, Argentina was seen as an example of how a country can develop using a free trade model. Now it is an example of the dangers. As the people of Argentina are driven by economic collapse to the point of starvation, they are being force-fed genetically engineered soya - designed not for people, but for cattle.

A group sponsored by biotech companies, multinationals and the richest landlords is pushing hard for this soya, using public relations, subsidies and a media blitz to try and alter the Argentinean diet away from traditional foods to soya products⁶⁰. Argentina now plants 21% of the global coverage of GE plants - second only to the U.S. in terms of acreage.

According to Jorge Rulli, a member of Rural Reflexion a group dedicated to sustainable agriculture, "We are addicted to soya. We have been assigned a role in the world as a producer of soya and in many ways we are now a laboratory. We are seeing all kinds of things due to toxicity: precocious sexual development, early pregnancies, and at the same time, stunted growth."⁶¹

The move toward a complete reliance on GE soya is the latest development in Argentina's transformation from being a food producing nation to a supplier of feed for the livestock of wealthy nations. Argentina's agriculture is becoming one huge monocrop that is destroying livelihoods and making them vulnerable to famine. While many Argentineans now go hungry, the majority of the soya produced is exported to Europe to feed cattle. The mechanized agriculture has also displaced many rural agricultural workers sending further waves of displaced people into the slums of Argentina's big cities.

Environmental consequences of the soya production have been appalling. The use of Roundup ready soya has also led to a major increase in the use of pesticides effecting health of farmers and the environments. Soya production has also led to deforestation. The Argentinean forest of Yunga is disappearing at a rate of 1000 ha per year to be replaced by a monoculture of soya⁶².

The industrialization of agriculture has increased Argentinean dependence on foreign imports and on transnational corporations. The removal of tariffs on imports has led many domestic farm machinery manufacturers to go bankrupt. The soy production has also led to a concentration in holdings with the number of farmers in the soybean growing region of Argentina dropping from 170,000 to 116,000 - a 32% decrease.

The market for Argentinean soya is also under threat because of its use of GE crops. As the soya is not going directly for human consumption in Europe it has not yet been banned but moves toward an "identity tracking system" which tracks produce from field to plate to eliminate all contamination could change this.

Even without an all out ban, the market for GE soya is collapsing. Prices for soybean declined 28% between 1993 and 1999 while prices for gasoline have risen 26%. Farmers profit margins fell by half from 1992 to 1999 making it very difficult for the farmers to pay off loans as well as afford the chemical inputs, machinery and seeds they need for industrial farming. The profit losses, bankruptcies and increased landlessness comes despite the fact that Argentinean farmers are allowed by law to save the seed. Even this law, which is not found in most other countries of the world, is not enough.

There are indications that Argentina is wanting to decrease its dependency on Monsanto's soya but it is in a very difficult position being already so reliant on Monsanto. Argentina's new policy of authorizing new GE seed only after it has been approved in the European Union has annoyed Monsanto representatives who stated, that the policy will endanger Monsanto's other projects in the country including an \$8 million cotton seed joint venture⁶³. Both the environment Minister and the Director General for Cultural Affairs have expressed doubts about the technology due to Argentina's farming crisis⁶⁴. After an initial high rate of approvals for the use of GMOs between 1996 and 1998, government authorizations for new products have fallen to

virtually zero.⁶⁵

Terminator seeds

Monsanto is one of the corporations that holds a patent for the notorious terminator technology (U.S. patent number 5,723,765). Terminator seeds are seeds that are designed to work only once - that is, their offspring will be sterile. If terminator seeds were sold, it would be impossible for farmers to save and replant seeds from their harvest. They would be absolutely dependent on the commercial seed market every year⁶⁶.

Terminator technology is a threat to food security, food sovereignty and Farmers' Rights and has caused an uproar throughout the world. Hundreds of civil society, farmers' and indigenous peoples' organizations worldwide have campaigned for a global ban on suicide seeds.

As a result of the massive campaigns, Monsanto publicly stated that it would not develop Terminator seeds for commercial sale. But they refused to give up the patent and are holding on to it in case public opinion changes. They also tried to acquire a company, Delta & Pine Land, which has publicly announced that it actively seeks to commercialize Terminator technology. Terminator technology is an outrageous threat to food security worldwide and Monsanto, along with all other companies involved, need to relinquish their patent to prove they will not try to sneak terminator technology through⁶⁷.

Monsanto on the move in the Philippines

Monsanto has been aggressively pushing ahead with plans to commercialize genetically modified crops in the Philippines. Already they are a major player in Philippine agribusiness, selling chemicals such as Roundup and Machete (banned in the U.S.A.) and seeds. In the Philippines they distribute seeds under the name Cargill, Monsanto and Dekalb.

Monsanto has worked with the Department of Agrarian Reform and of Agriculture in relation with the Comprehensive Agrarian Reform Program (CARP), to supply chemicals and training to relocated Filipino peasants. Monsanto's involvement with the new land reform beneficiaries not only ensures that they will be led into chemical input-intensive agriculture but also that they will begin farming already indebted to this major chemical corporation. Between 1995 and 1997, Monsanto's sales in the region increased six-fold⁶⁸.

Trials and tribulations



Agro-diversity of crops and varieties are reduced by a mono-culture approach to agriculture threatening food security and ecological sustainability.

Monsanto gained approval last year for its Bt-corn (see above for problems associated with Bt crops) in the Philippines which it will be marketing under the name Yieldgard™. The approval was highly contentious and came despite the efforts of farmers groups, scientists, church groups, non-government organizations and peoples' organizations.

Monsanto's Bt-corn was approved for commercialization without any safety tests. There were no feeding studies, no tests to check for environmental risks such as genetic contamination and effects on non-target organisms, and no socio-economic risk analyses undertaken. One Monsanto representative in Mindanao untruthfully claimed in front of a gathering of farmers and policy makers that feeding studies had been done. Monsanto later retracted this claim saying the Monsanto representative was mistaken.

Monsanto managed to attain approval for Bt-corn citing corporate studies without providing data or information on study processes, and by pointing to the USDA's acceptance of bt products. In justifying its approval, the DA refers to a 'balikbayan box' of documents sent from the U.S. by Monsanto to show the safety of the product. However, corporate science is not the same as independent science. As the rest of this report indicates, not only has Monsanto's "science" been proven dubious time and time again, but many countries have in fact rejected GMOs on health and environmental grounds. The U.S. is one of the few countries that have accepted the technology.

The only testing that was done in the Philippines was to test for efficacy

(that is, whether the Bt-Corn could be shown to be resistant to corn borer in the test plots). Even these studies did not release the data to the public. The tests were conducted in open areas, directly adjacent to conventional corn crops and without recommended precautions such as greenhouses. The test sites were heavily guarded. In Isabela, Monsanto employed 50 people to protect a small experimental test plot. This included 10 agents from a security agency and 40 farmers, some of whom worked with the managing of the test plot as well as security duty.

In Mindanao, on a field test site of Bt-corn in Kibawe, Bukidnon, security was provided by former military man infamous for human rights abuses during the dictatorship of Marcos. More than 50 security guards, some wearing ski masks and balaclavas, defended the site armed with shotguns. In one incident, they fired several times into the air towards onlookers during a protest. Despite this security, in Mindanao, 800 farmers, scientists, indigenous people and local groups uprooted Monsanto's test site (see below). Monsanto and its genetically engineered seeds are not welcome.

In both of the field site areas, Isabela and General Santos, Monsanto pursued the field test despite the existence of a council resolution banning field tests on genetically modified organisms.

In Isabela, although the plots were supposed to test for dry season yields, the plots were irrigated during testing. Given that most farmers in the Philippines do not have access to irrigation this gives a misleading idea of yields which could lead farmers into mistakenly buying seeds, experiencing failure and getting further into debt.

Monsanto has also publicized high yields for Bt-Corn. The company claims that field tests have shown Bt-Corn will increase yields of white corn from a national average of 1.82 metric tons to five metric tons per hectare⁶⁹. Again, this claim is misleading as it is based upon ideal conditions not available to most Filipino farmers. Many corn farmers in the Philippines live in marginal, unirrigated areas with poor soil fertility. The major problem for many corn farmers is access to market and low corn prices. In fact, just a few years ago, stock piles of corn rotted in warehouses in Mindanao as farmers were unable to receive enough financial compensation for their product to justify its transportation.

Claims of yield increases of 30% are based upon the idea that BT-corn will avoid yield losses that may occur to due to corn borer infestation. Corn

borer, however, is not a major problem in many areas in the Philippines including in the areas that Monsanto is most avidly promoting the corn. When doing trials for example, the lack of corn borer in the region meant that Monsanto had to actually import corn borer for its field trials. This means farmers are unlikely to attain yield gains at all with Bt-corn although they are



The Yieldgard test site in Isabela, Philippines

paying nearly twice as much per bag for the seeds. Most farmers do not understand the rationale behind Monsanto's claim of a 30% increase and are basing the high cash outlay, and borrowing additional money for capital, on the basis that their yields will increase. The end of the season may well find them deeper in debt and with no increase in harvest to show for it.

By contrast, the recent farm economics report from the U.S. Department of Agriculture states that GM crops do not increase yield potential and may reduce yields and that Bt corn has had a negative economic impact on many farms [pages 21 and 30 of USDA report]⁷⁰.

Brave new world

After achieving approval for Bt-corn, the next step for Monsanto is to propagate the seeds. At the present time Monsanto does not have the volume of seeds they need to commercialize Bt-corn. Many of Monsanto's seeds are usually produced in other Asian countries and imported but, because the Philippines is the first country in Asia to allow Bt-corn, the seeds have to be produced in the Philippines. At present, seeds are being planted in the provinces of Isabela and

Pangasinan to produce seeds to go to market in May/June.

The Bt traits are being genetically inserted into existing hybrid corn. This means that farmers will not be able to collect the seeds from the corn as the offspring of hybrids do not grow true to type. Monsanto doesn't have to worry about policing their patents to get the farmers to buy seed every harvest because farmers will already have the prospect of a loss in hybrid vigor as an incentive. Also with Yieldgard™, a portion of the seeds will lose the trait as part of a natural segregation process. It is expected that only 75% will of the next generation of seeds will carry the trait of Bt. In this way, Monsanto is already drawing farmers into an industrialized agriculture where they are reliant upon corporations to buy seeds year after year. This adds to their all ready high production costs and will tend to lead farmers even deeper into debt.

Monsanto is also campaigning hard to achieve a 50% subsidy from the Philippine government⁷¹. This multinational corporation with sales of \$4.5 billion U.S. per year, is aiming to take money directly from the Philippine government and the Filipino people to prop up its genetic engineering business. The unsubsidized price is reported to be 4,200 to 4,600 pesos per sack. This is many times the price of even the most expensive hybrid seeds. In a country of mostly subsistence farmers, luring them to buying seeds at nearly \$100 U.S. per bag is ridiculous. These seeds are so unprofitable that Monsanto needs direct contributions from the Filipino people to line its greedy pockets.

In Southern Mindanao, Monsanto is hiding behind NGOs, the Department of Agriculture and government financing institutions such as the Quedan Corporation, to spread its genetically engineered seeds and branded hybrids. It is giving incentives to cooperatives who sell Monsanto's corn. One cooperative was promised a computer if they could see 100 bags of Monsanto's corn. This is deceiving in that farmers are led to believe that the outreach is done for social reasons rather than for the for-profit motives of Monsanto.

In the province of Isabela, Monsanto has employed 30-50 "technicians" that go out and sell the variety. In calling themselves "technicians" rather than salespeople, Monsanto is again trying to hide behind the credibility of science to sell its dubious products.

Monsanto is currently working on introducing Roundup ready corn to the Philippines and also a variety that has both herbicide tolerance and the Bt

trait. This will lead to all the problems of increasing chemical use and environmental damages outlined in the rest of this report. It makes a mockery of claims that Bt-corn will reduce pesticide use.

When introducing the *Roundup Ready* corn, Monsanto has plans to focus on upland areas which are traditionally subsistence based areas with higher numbers of indigenous people and poorer farmers like the Ifugao. Monsanto's claim is that to focus on the upland areas because of the varieties can be used for so-called "conservation tillage". This means that rather than plowing the field to get rid of weeds and/or crop residue, they can spray with herbicide and so will prevent erosion. Throughout the Third World, Monsanto regularly offers financial start-up packages and incentives in order to promote its chemical and agricultural products⁷². Not only will this heavily increase chemical use in these high conservation areas but will also draw in many subsistence farmers into the cycle of debt and poverty, exchanging the rich cultural heritage and abundant traditional varieties with industrial, genetically engineered monocultures.

Dirty politics

Dirty Politics

Many people point to the acceptance of GE in the U.S.A. as a justification that GE is really safe and should be accepted everywhere. But protests and resistance to GE has been on the rise in the U.S. as consumers and farmers learn more about the dangers of the products. The fact is, early GE products were rushed through in the U.S. helped by a system that put high level Monsanto executives in decision-making positions with the U.S. government and U.S. government officials put in Monsanto. All this was backed up by large 'donations' by Monsanto to U.S. senators who could then be relied upon to promote Monsanto's needs in government.

Biotechnology companies in total gave \$633,850 to U.S. politicians at the federal level during the current and previous election cycles. Monsanto itself gave \$74,900 to politicians, political action committees (PAC), and political parties in the 2000 election cycle⁷³. In this election cycle so far, Monsanto has given a total of \$119,104 to U.S. politicians (as of 31 December 2002) through the Monsanto Company Citizenship fund⁷⁴.

One of Monsanto's major 'contributions' went to John Ashcroft who is

now the U.S. Attorney General. He holds immense power in the U.S and led calls to promote GM crops in developing countries and Europe. Monsanto gave him \$18,000 towards getting reelected. He is now one of the most powerful people in the world and Monsanto has his thanks⁷⁵.

The ties between Monsanto executives and the U.S.'s Bush administration are extremely strong. The secretaries of defense, health and agriculture, the attorney general and the chairman of the House agriculture committee all have links with Monsanto or the biotech industry.

The secretary of health and human services which has overall responsibility for food safety, pharmaceuticals and the Food and Drug Administration, and licenses biotechnology in the U.S. is Tommy Thompson, a major GM supporter who accepted campaign contributions from Monsanto. He used state funds to set up a 3200m biotech zone and was one of 13 state governors to launch a campaign, partly funded by Monsanto, to persuade Americans of the benefits of GM crops. The agriculture secretary Ann Veneman was a director of the biotech company Calgene, now owned by Monsanto and Donald Rumsfeld, the defense secretary, was president of Searle Pharmaceuticals when it was bought by Monsanto. The Chair of the powerful House of Representatives agriculture committee, Larry Combest, also received \$2,000 from Monsanto in the most recent elections⁷⁶.

Monsanto has a similarly cozy relationship with the regulators in the U.S.A. This means that the very people deciding on food safety and regulations for genetically engineered products are ex-Monsanto people. William D. Ruckelshaus, for example, who was the former chief administrator of the United States Environmental Protection Agency (U.S.EPA) was a member of the board of directors of Monsanto Corporation for over a decade⁷⁷.

The current Deputy Administrator of the EPA Linda Fisher also used to be a Monsanto executive. From 1995-2000, she was Vice-President and Corporate Officer at Monsanto where she had responsibility for government & public affairs. She served as Monsanto's representative on the Usda's Biotech Advisory Committee. She has now gone to work for government to supposedly regulate this very same company⁷⁸.

From Monsanto to the government and from the government to Monsanto, there is a "revolving door" that allows executives, politicians and regulators to pass round and round. Michael (Mickey) Kantor, for example, a

former Secretary of the United States Department of Commerce and former Trade Representative of the United States, is now a member of the board of directors of Monsanto Corporation. Josh King is a former director of production for White House events who became the director of global communication in the Washington, D.C. office of Monsanto Corporation⁷⁹.

This technique is employed wherever Monsanto goes. In the Philippines, the Deputy Director of IPB, the Institute of Plant Breeding, Manny Logroño, is now working with Monsanto, and Mr Aristottle Burgonio also previously of the IPB has also moved to Monsanto. Others including the ex-Director Dr Violeta Villegas have also been part of this 'revolving door' with multinationals transferring to Syngenta, Dole, or EastWest. IPB is the country's premier breeding center for crops other than rice. It cooperated with Pioneer and Cargill in field tests for efficacy of Bt-corn, triggering controversy within the University of the Philippines - Los Banos and the Filipino scientific community. The project leader for the controversial Bt-corn trials in the Philippines, Mr Ed Fernandez, who worked as head of the Entomology Lab of IBP, has also reportedly recently transferred to Monsanto.

Monsanto also gives 'incentive tours' to the U.S. to Filipino wholesalers who successfully press Monsanto products on farmers. Such tours have been conducted for Filipino journalists, scientists, religious leaders and others who are trusted by the public to provide neutral information. In an impoverished country and one that is culturally inclined toward politics of patronage, an overseas trip is 'incentive' indeed. Monsanto has wined and dined municipal and provincial officials to ensure support of their products and is currently campaigning to receive a 50% subsidy for their seeds. Such a subsidy would lure farmers into using GE seeds to enrich Monsanto's huge coffers literally at the expense of the Philippine government and the people of the Philippines.

Suspect Science

Time and time again court cases against Monsanto have showed a history of cover-up, manipulated data and misleading experimental design.

In a trial in West Virginia regarding the exposure of railroad workers to Dioxin, an official of the U.S. EPA concluded that Monsanto's data was manipulated. During the trial testimony showed that Monsanto misclassified exposed and non-exposed workers, arbitrarily deleted several key cancer cases,

failed to properly classify subjects, was unable to provide assurance of untampered records and made false statements about dioxin contamination in Monsanto products. By omitting five deaths in the exposed group and putting four exposed workers in the control group, Monsanto was able to hide a 65% higher death rate in the workers exposed at the Nitro plant.⁸⁰

The trial lasted three years and eight months and was full of testimony regarding Monsanto's suspect science. In the end, the jury decided against Monsanto in a very unusual way. Although they did not see that the railway workers themselves had suffered harm to date and gave awards as low as one dollar for the plaintiffs, they were so outraged at the behavior of the Monsanto Company that they demanded more than sixteen million dollars punitive damages. The plaintiffs eventually lost on appeal on the technical legal ground that a punitive award could not be made in the absence of actual damages regardless of the facts in the case⁸¹.

Some of the allegations made by plaintiffs attorneys include that: Monsanto failed to notify and lied to its workers about the presence and danger of dioxin in its chlorophenol plant, so that it would not have to bear the expense of changing its manufacturing process or lose customers; Monsanto lied to EPA that it had no knowledge that its plant effluent contained dioxin; Monsanto secretly tested the corpses of people killed by accident in St. Louis for the presence of dioxin and found it in every case; Monsanto sold consumer products, including those recommended for cleaning babies' toys, knowingly contaminated with dioxin, without warning the public for

"There are numerous... flaws in the Monsanto health studies. Each of these misrepresentations and falsifications served to negate any conclusions of adverse health effects from dioxins."

"Monsanto has in fact submitted false information to EPA which directly resulted in weakened regulations"

Dr. Cate Jenkins, U.S. EPA Regulatory Development Branch, 1990.

"There is a clear pattern of fraudulent misconduct in the dioxin science performed by the chemical industry and its indentured academics."

Dr. Samuel Epstein, Professor of Occupational and Environmental Medicine, University of Illinois, 1990. (Greenpeace. 1997. Monsanto's Criminal Record For Environmental Contamination).

over thirty years; and, even though the Toxic Substances Control Act requires chemical companies to report the presence of hazardous substances in their products to EPA, Monsanto never gave notice and lied to EPA in reports⁸².

A Canadian paper, the Toronto Globe and Mail said, “The evidence of Monsanto executives at the trial portrayed a corporate culture where sales and profits were given a higher priority than the safety of products and its workers. They just didn’t care about the health and safety of their workers. Instead of trying to make things safer, they relied on intimidation and threatened layoff to keep their employees working.”⁸³

This misleading and fraudulent science has been seen in many incidences. A review by Dr. Jenkins of the EPA’s regulatory branch showed that Monsanto had systematically and over several years submitted false information. Monsanto failed to report contamination, submitted false information or specially submitted “doctored” samples that had been specially prepared to be uncontaminated⁸⁴.

A criminal investigation against Monsanto was initiated and went on for almost two years. However, despite the government’s assurances that it would “investigate any allegations of fraud and, if appropriate, evaluate the full range of enforcement options” it did not rigorously pursue the case. In August of 1992, EPA quietly closed the criminal investigation without ever determining or even attempting to determine if the Monsanto studies were valid or invalid, let alone fraudulent. Recent EPA reports say that there is now convincing human evidence of the carcinogenicity of dioxin, in contradiction to the Monsanto studies⁸⁵.

Of course, these are just some of the times that Monsanto has been caught. Who knows how many other examples there are where Monsanto has managed to continue to deceive the public. This is the company whose data on ‘safety tests’ for genetically engineered products we are asked to trust. It is more like suicide.

Monsanto, the bully

Monsanto has tried to bully farmers, small companies, states and even countries into adopting its products and into keeping silent about its problems. Thankfully there are many who are not afraid to stand up against this giant even at the risk of major personal loss. In addition to threatening to sue hundreds of farmers in North America, Monsanto has threatened to sue publishers and television companies if they allow critical stories to go ahead.

It has also threatened small companies and even a U.S. state, saying that labeling products as GMO free is defamatory. Countries like Argentina have been bullied in other ways with Monsanto saying they will withdraw processing facilities and other projects if the countries do not accept GE seed.

Monsanto threatened to sue a major television network, Fox, if it ran a documentary revealing some of the dangers of GMOs. Monsanto claimed the documentary would cause them “enormous damage.” The TV network responded by pulling the show and firing the two journalists who insisted their documentary be shown without distortions. The two journalists, Jane Akre and Steve Wilson have since kept fighting Monsanto and were awarded a Goldman environmental prize for their efforts.⁸⁶

Monsanto also tried to stop the book, “Against the Grain” from being published. This book again tries to show some of the negative consequences of GMOs in agriculture and exposes some of the dangers of Monsanto’s herbicide, Roundup. The original publisher Vital Health caved in to Monsanto’s demands and refused to publish the book written by Mark Lappe and Britt Bailey of the Center for Ethics and Toxics (CETOS). Luckily a courageous publisher Common Courage Press has agreed to go ahead with the book to help us get the information we need about genetic engineering⁸⁷.

Monsanto has also attacked scientists who publish research that questions genetically engineered crops. For example, Monsanto and its aggressive PR company ran a smear campaign against two scientists from the University of California at Berkeley after they published research in the journal *Science* showing GM contamination of maize in Mexico. The campaign led to the article being withdrawn even though the majority of the journals reviewers did not agree with such a step. It also led to threats against the tenure of one of the academics at the University of California⁸⁸.

Bullying authors and scientists is nothing new for Monsanto. When Rachel Carson first wrote *Silent Spring*, a vitally important book in the history of the worldwide environmental movement that exposed the dangers of pesticides, Monsanto tried to destroy her. They mounted a tremendous advertising campaign to discredit her and invalidate her work⁸⁹.

Monsanto has also used the perversion in the U.S. legal system that allows corporations to act like ordinary citizens under the law and so claim the same constitutional rights to free speech and nondiscrimination. This has allowed a



Rachel Carson, author of Silent Spring was harassed by Monsanto

massive, profit-driven fiction such as Monsanto make legal claims about “defamation” of its products. This is a legal protection intended for individuals. In 1998, for example, Monsanto threatened the State of Vermont in the U.S., for trying to pass a weak law aiming to verify claims that milk products were free from Bovine Growth Hormone. Although Vermont did eventually pass a law, it was watered down as a result of consultation with Monsanto⁹⁰.

What we can do/ACTION!

The people against Monsanto

Throughout the world, people from all walks of life are standing up to Monsanto. They are demanding that life is not for profit, that farmers have the right to save their seed and care for the earth, and that we all have the right to live in a world free of GMOs.

In every continent, groups of people have got together and uprooted fields of genetically engineered crops. In Mindanao in the Philippines 800 farmers, church people, students and other members of civil society groups bravely stormed Monsanto’s experimental field uprooting all Bt-corn plants. Around 100 indigenous Lumads also took part in the protest action. In India, thousands of farmers occupied and burned down the three fields of genetically modified cotton in front of TV cameras in Karnataka in an open act of civil disobedience⁹¹. Such actions have also taken place in Brazil, New Zealand, the U.S. and throughout Europe.

Peoples’ movements have taken other actions against Monsanto. Pro-

tests have been made at the company's annual general meetings, lawsuits have been filed, conferences held to share information, scientific experiments conducted to disprove their suspect science, protests and marches held by millions all over the world. Local governments have passed resolutions against Monsanto and GMOs. In Bay, Laguna in the Philippines a field trial was successfully stopped by an anti-GMO council ordinance. For 29 days in April and May of 2003, environmental activists held a hunger strike in front of the gates of the Department of Agriculture to demand for a moratorium on the commercialization of Bt-corn.

And campaigns have been successful. In Europe, public opinion against GMOs are so strong that a moratorium was put in place. Australia and New Zealand, Europe, South Korea, Saudi Arabia, Brazil, and Sri Lanka are among those countries that have severely restricted GMOs through bans, partial bans or labeling restrictions.

Algeria has banned the import, distribution, commercialization and utilization of genetically engineered plant material, except in the cases of research. Egypt has declared that it will not import genetically engineered wheat. Greece has banned AgrEvo herbicide-resistant rapeseed, and has imposed a moratorium on biotech crop trials. Four Italian regions have banned biotech crops and Japan has banned the import of genetically engineered wheat, and adopted recent legislation which has set zero tolerance for imports that contain unapproved genetically engineered foods.

Supermarkets and major food producers are bowing to demands from the public for GM free food. Food giants Nestle and Unilever in Europe have stated they are GM free. Major supermarket chains in Europe and the U.S. have pledged to avoid it and even the company responsible for providing catering services to Monsanto decided in 1999 to remove, as far as possible GM soya and maize from their food.

And the flow of new products on the market has been severely restricted. Even in the U.S., bastion of the GE giants, Monsanto is forced to wait to see if Japan and Europe will accept GE wheat before it is approved. A decade ago, Monsanto would have thought their products would be everywhere and they would be swimming in profits, instead they are drowning in trouble and controversy. Economically, the public outcry against GMOs, patents on life and the corporatization of our food chain have hurt Monsanto where it hurts - in its

profits. They made a loss last year and share prices have plummeted. After another shock resignation of their CEO in December, they are still to find a replacement. This is a company in trouble.

Supporting small farmers

The alternatives to Monsanto's style of corporate, industrialized agriculture already exist and have existed for millennia. Throughout the world, farming communities have initiated projects to bring biodiversity back into the fields and to reclaim their independence from the corporate system. In doing so they regain the self respect and control denied by Monsanto and industrial agriculture. The farmers reclaim their place as breeders, managers and stewards, promoting an agriculture that is organic and based upon community values.

The MASIPAG program of the Philippines is one such example. With over 30,000 farmer members, MASIPAG is a non-government organization that aims to contribute to farmers empowerment, soil regeneration and rehabilitation of biodiversity among marginalized farming communities. This is done through the use of locally adapted sustainable farming systems using farmer-bred and farmer-selected seeds. MASIPAG farmers are encouraged to use farmer-bred seeds and to recover traditional seed varieties within their own locality. Trial farms are set up in rural communities and managed by local farmers who thereby become the real leaders of the recovery and conservation program. As their knowledge improves, farmers are more able to choose the best locally adapted parent materials which will perform successfully in their fields.

There are many other examples in communities throughout the world where rural families have decided to take control back from corporations and develop an agriculture that can sustain the people and the environment. Farmer-centered research approaches are being pursued on every inhabited continent. It is these approaches that feed the world, rather than the pockets of companies like Monsanto and their shareholders.

It is time that agriculture was rooted in Farmers' Rights and farmer empowerment. Rather than working for the needs of mega-corporations, agriculture should be farmer-led, environmentally and socially sustainable, and focused on the needs of the poor. For genuine development and empowerment, solutions must be found that are based on the needs of the farmers and farming communities using the science of farmers not of elites and corporations.

By using farmer-bred seeds and community ownership, as well as organic farming, small farmers can bypass the problems of Monsanto and continue independently of corporations. Their lives, the lives of their communities and the lives of all of us on this planet do not need to be held hostage to profit.



Adopted at the Workshop, *Defend Farmers' Rights From Threats of the Philippine Plant Variety Protection Act 2002*,
Dona Jovita Resort, Laguna, Philippines, 2-4th August 2002.

Collectively, farmers share the social responsibility to feed society. For generations, they have nurtured and bred our food crops, and have conserved and improved the genetic resources that form the basis of food and agriculture. With farmers' responsibility to feed society, and stemming from their enormous contribution, comes farmers' rights. Farmers have rights over their innovations, practices, knowledge, technologies and biological resources evolved through generations, over the factors and processes of production (land, capital, technology, inputs), and over legal and political decisions that undermine their ability to produce food and conserve genetic resources.

The seeds, food, animals and associated knowledge that farmers have conserved and developed are not the product of any single farmer but are the collective products of many farming communities through many generations.

Farmers rights are thus collective rights and farmers are not owners, but stewards, of our biodiversity and genetic resources.

Farmers must be free to produce food, and must be appreciated, recognized, protected and strengthened in their work by their inalienable and inviolable rights relating to seeds, production, biodiversity and genetic resources, politics and decision-making, culture and knowledge, land, information and research, and sociopolitical factors as follows:

*With respect to **LAND** farmers have the right to:*

- Own land;
- Swift and just land redistribution programs;
- To use abandoned and unproductive lands (both public and private)

for the purposes of food production.

*With respect to **SEEDS AND GENETIC RESOURCES**, recognizing that seeds are the life of the farmer, farmers have the right to*

- Use, save, exchange, multiply, sell and improve their genetic resources;
- Control seeds and planting materials including the right to refuse access to the seeds and knowledge where such access will be detrimental to farmers rights (such as to transnational corporations and international research institutions as appropriate);
- Access seeds and genetic resources appropriate to their local environment and to the capacity and needs of farmers in their communities;
- Freely choose what seeds, plants and animals to use on his/her farm.

In **PRODUCTION** farmers have the right to:

- Appropriate technologies which are simple, practical and inexpensive and do not harm the environment or human health;
- Abundant and safe water systems;
- Prevent technologies, policies, programs and institutions that have the potential to destroy the resource base of farming, including the land, the water, the air, and seeds;
- Control the products of the harvest and the benefits of production including marketing and distribution;
- A fair price for their products.

On **BIODIVERSITY** farmers have the right to:

- Conserve and protect biodiversity and genetic resources including on and off-farm biodiversity and watersheds which are an integral part of farming systems;
- Prevent technologies, policies and institutions that destroy the watershed and otherwise negatively impact on the ability of farmers to produce food and conserve biodiversity (e.g. logging, mining, and chemical based farming).

In **POLITICS AND DECISION-MAKING** farmers have the right to:

- Join, support and form institutions that protect the rights of farmers;
- Meaningful participation in formulating policies, laws and programs that affect farmers' lives on local, national and international levels;
- Block laws, policies, programs and institutions that are contradictory to sustainable agriculture or farmers' rights;
- Government subsidies and support in agriculture including improved traditional varieties and indigenous resources.

On **CULTURE AND KNOWLEDGE** farmers have the right to:

- Control and use their own traditional knowledge free from the threat of biopiracy;
- Freely express their local culture and knowledge, and to pass it on to future generations;
- Respect for their way of life, their farming practices and their knowledge;
- Live in a world free of privatized intellectual property rights.

In **INFORMATION AND RESEARCH** farmers have the right to:

- Independent and balanced information about seeds and agriculture in order to make informed choices;
- Truth in advertising including the right not to be bombarded with misleading or exaggerated statements designed to promote certain varieties of seeds for profit;
- Updated, independent and balanced information on issues that affect farmers' rights;
- Undertake their own research and develop innovation;
- Provide direction for agricultural research.

*In the **SOCIOPOLITICAL** area farmers have the right to:*

- Organize and join organizations to protect and promote their rights;
- Promote sustainable agriculture and ecologically abundant agriculture;
- Live in a community that is peaceful and decent;
- Access safe and healthy food;
- A dignified and meaningful life;
- A viable and sustainable livelihood.

These rights aim to safeguard farmers against the negative effects of globalization including the excessive power and influence of transnational corporations. Farmers rights implicitly reject intellectual property rights and genetic engineering which compromise farmers' ability to produce food and to fulfill their obligations as stewards of genetic resources. Privatization of genetic resources clashes with the very essence of farmers rights which implies collective rights and responsibilities. We call on governments and institutions to recognize and implement these rights at local, regional, national and international levels. Farmers have the right and duty to defend themselves, their knowledge, the land and genetic resources against any threat in whatever form it may take. Food security is only possible if we allow farmers to freely grow food and protect agrobiodiversity as has been their right and responsibility for generations. Recognition and implementation of farmers rights is essential not only to protect farmers in the present but in order to ensure the continuity of activities that are crucial for humanity at large.

Endnotes:

¹Hoovers Online, Monsanto Company Profile [accessed April 2003]; Monsanto Corporation, 2003, Spring 2003 Investor Meetings.

²Scott Killman, 2002, "Monsanto Seeks Successor, may face more upheaval", Wall Street Journal, 19 December 2002; A.V. Krebs, 2003, "Monsanto Sales Down, CEO Verfaillie Out and Weed Resistance Up", The Agribusiness Examiner, 8 Jan 2003, Issue #214.

³Jim Suhr, 2003, "Justice Department Opens Monsanto Probe," The Associated Press; Randy Fabi, 2003, "USDA Mulls strict rules for Monsanto Biotech Wheat," Reuters.

⁴Innovest Strategic Value Advisors, 2003, Monsanto: heading for disaster?

⁵Hoovers Online, Monsanto Company Profile [accessed April 2003]

⁶Vandana Shiva, Monsanto's Expanding Monopolies, Research Foundation for Science, Technology and Ecology, New Delhi.

⁷Hoovers Online, Monsanto Company Profile [accessed April 2003]

⁸Monsanto Corporation, 2003, Spring 2003 Investor Meetings.

⁹David Brunnstrom, 2002, "Agent Orange no mystery for some Vietnam children." Reuters News Service. <<http://www.planetark.org/dailynewsstory.cfm/newsid/14888/story.htm>>.

¹⁰Meryl Nass, MD, 2002, "Monsanto's Agent Orange: The Persistent Ghost from the Vietnam War," Organic Consumers Association.

¹¹Jeremy Bigwood, 2001-02, "Monsanto and the 'Drug War,'" Earth Island Journal, Winter 2001-2002.

¹²Greenpeace, 1997, Monsanto - The Chemical Giant Experimenting with our Food.

¹³Michael Grunwald, 2001, "Monsanto Hid Decades Of Pollution: PCBs Drenched Ala. Town, But No One Was Ever Told", Washington Post. January 1, 2002, Page A01.

¹⁴Greenpeace, 1997, Monsanto's Criminal Record For Environmental Contamination.

¹⁵Greenpeace, 1997, Monsanto - The Chemical Giant Experimenting with our Food.

¹⁶Cate Jenkins, Ph.D., Chemist Regulatory Development Branch (OS 332) Characterization and Assessment Division, "Criminal Investigation of Monsanto Corporation - Cover-up of Dioxin Contamination in Products - Falsification of Dioxin Health Studies," Memorandum to Office of Criminal Investigations Center, EPA.

¹⁷Greenpeace, 1997, Monsanto's Criminal Record For Environmental Contamination.

¹⁸Herbicide Factsheet: Glyphosate (Roundup), Journal of Pesticide Reform, Fall 1998, updated November 1998. (<http://www.pesticide.org>); CropChoice news, Wednesday, Sept. 25, 2002; Rachel's Environment and Health News, issue 751, Sept. 5, 2002; EHP Supplement 3, Vol. 110 (June 2002), pgs. 441-449.

¹⁹Lennart Hardell, M.D., PhD. Department of Oncology, Orebro Medical Centre, Orebro, Sweden and Miika Eriksson, M.D., PhD, Department of Oncology, University Hospital, Lund, Sweden, 'A Case-Control Study of Non-Hodgkin Lymphoma and Exposure to Pesticides', Cancer, March 15, 1999/ Volume 85/ Number 6.

²⁰The soil association, 2000, Briefing paper, Pesticides: Glyphosate.

²¹PANUPS, "Monsanto Agrees to Change Ads and EPA Fines Northrup King," January 10, 1997; "Monsanto Strategies," The Guardian (UK), September 17, 1997.

²²Greenpeace, 1997, Monsanto's Criminal Record For Environmental Contamination.

²³Ibid.

²⁴Greenpeace. 1997. Monsanto's Criminal Record For Environmental Contamination; George George Draffan, Monsanto Corporate Profile, Public Information Network.

²⁵Quoted from Brian Tokar, "Monsanto a chequered history", The Ecologist, Sept/Oct 1998

²⁶"Milk, rBGH, and Cancer", Rachel's Environment and Health Weekly #593 April 9, 1998.

²⁷Shiv Chopra and others, 1998, RBST (NUTRILAC) "Gaps Analysis" Report by RBST Internal Review Team, Health Protection Branch, Health Canada, April 21, 1998. p29.

²⁸"Milk, rBGH, and Cancer", Rachel's Environment and Health Weekly #593 April 9, 1998.

²⁹Greenpeace, 1997, Monsanto's Criminal Record For Environmental Contamination.

³⁰George Monbiot, 1999, Monsanto loses its hormones, 22nd July, 1999.

³¹African Scientists Condemn Monsanto's Latest Tactics and Call for European Support, 3rd August 1998.

³²Robert Vint, 2002, "Force - Feeding The World," Genetic Food Alert.

³³Guy Hatchard, 2002, "U.S. farmers reap heavy penalty for sowing GM crops," New Zealand Herald, 28 August 2002.

³⁴Soil Association UK, 2002. Seeds of doubt: experiences of North American farmers of genetically modified crops, September 2002.

³⁵Greenpeace, 2002, Press release, Philippines.

³⁶Third World Network 2002, Open letter to the Government of the U.S.A, the World Food Programme, the World Health Organisation, and the Food and Agriculture Organisation, 20 September 2002.

³⁷Technical report on the Food Standards Agency project G010008, 2002, Evaluating the risks associated with using GMOs in human foods, University of Newcastle.

³⁸Lappe & Bailey, 1998, Against the grain: biotechnology and the corporate takeover of food,

Common Courage Press.

³⁹Sadhbh O' Neill, June 1999, "New Study Links Monsanto's Roundup to Cancer" Genetic Concern; *CropChoice news*, Wednesday, Sept. 25, 2002 ; *Rachel's Environment and Health News*, issue 751, Sept. 5, 2002.

⁴⁰International Survey of Herbicide Resistant Weeds, <<http://www.weedscience.org/>>; Associated Press, December 18, 2002; *St. Louis Dispatch*, December 19, 2002.

⁴¹Food Chemical News, 2002, "Organic Farmers' Class Action Suit Moves Slowly in Canadian Courts", from *The Agribusiness Examiner*, May 10, 2002 #161.

⁴²Randy Fabi, 2003, "USDA Mulls strict rules for Monsanto Biotech Wheat," Reuters.

⁴³Greenpeace, 1997, Monsanto - The Chemical Giant Experimenting with our Food.

⁴⁴"Bt cotton failed to give results in Vidarbha," *The Hitavada* (central India's major newspaper), Sep.4, 2002.

⁴⁵Ashok Sharma, 2003, "Regulator says no to Bt Cotton Cultivation" *Financial Express*, April 26, 2003.

⁴⁶Hilbeck, A., Moar W.J., Pusztai-Carey M., Filippini A. and Bigler F, 1998, "Toxicity of *Bacillus thuringiensis* CryIAb Toxin to the Predator *Chrysoperla carnea* (Neuroptera: Chrysopidae)", *Environmental Entomology*, Vol. 27, no. 4, August; Hilbeck, A., Baumgartner, M., Fried, P.M. & Bigler, F., 1998, "Effects of transgenic *Bacillus thuringiensis* corn-fed prey on mortality and development time of immature *Chrysoperla carnea* (Neuroptera: Chrysopidae)", *Environmental Entomology*, Vol. 27, no. 2, p 480-487.

⁴⁷Geoffrey Lean, 2003, "Insects thrive on GM Bt pest-killing crops" *Independent on Sunday* (London), March 30, 2003.

⁴⁸From Patent application WO 02/28184/5. Quoted in *The New Scientist*. August 17, 2002. Vol 175, page 22.

⁴⁹Letter from the President of the American Corn Growers Association to EPA's Christine Todd Whitman regarding negative market impact to farmers from Bt Corn, August 26, 2001. See <www.biotech-info.net/ACGA_letter.htm>.

⁵⁰Letter from the President of the American Corn Growers Association to EPA's Christine Todd Whitman regarding negative market impact to farmers from Bt Corn, August 26, 2001.

⁵¹Dr. Vandana Shiva, 2003, "The Monsanto Amendment: The Real Reasons for the Second Amendment of the Indian Patent Act", *Synthesis/Regeneration*, 30 (Winter 2003).

⁵²ETC Group, 2003, "Europe's (and the world's) big soy berger: Patently Wrong", News Release, May 7, 2003.

⁵³David Mercer, 2003, "Seed Makers suits sow hostility," *Arkansas Democrat Gazette*, May 18, 2003.

⁵⁴The Campaign to label genetically modified foods, 2001, Heartbreak in the Heartland: The True Cost of Genetically Engineered Crops, 26 minute video of farmers speaking out about GMOs. Taped October 10, 2001 at the University of Texas, Austin.

⁵⁵James Parker, 2003, "Patent battle lives on: Schmeiser to take fight against Monsanto to high court," *The StarPhoenix*, 9 May 2003.

⁵⁶See Monsanto sues Nelson farm <<http://www.cropchoice.com/leadstry.asp?recid=244>>

⁵⁷Associated Press, 2003, "Farmer sent to prison over cotton seed," *The Knox News Sentinel*, May 10, 2003.

⁵⁸Brandon Copple, 2002, "One Cotton-Pickin' Mess", *OutFront*, 14 October 2002.

⁵⁹Vandana Shiva, Monsanto's Expanding Monopolies, *Research Foundation for Science, Technology and Ecology*, New Delhi.

⁶⁰Ben Blackwell, 2003, "Soya republic", *The Ecologist*, 22 January, 2003.

⁶¹*Ibid.*

⁶²*Ibid.*

⁶³Norfolk Gene Information Network, 2002, Monsanto Wants to "Help" Argentina, 12 December 2002.

⁶⁴Mae-Wan Ho, 2000, Argentina Cools to GM Crops, 24 September - 1 October 2000. http://www.biotech-info.net/Argentina_cools.html

⁶⁵Damian Wroclawsky, 2002, "GMOs help Argentina fight subsidies, Monsanto", Reuters, 11

December 2002.

⁶⁶Matthew Townsend, 1998, "Meet the company that would privatise nature itself " The Age, Melbourne, Australia, Tuesday 15 December 1998.

⁶⁷John Vidal, 1999, "World Braces for Terminator 2," The Guardian, London, October 6 1999.

⁶⁸Rod Harbinson, 2003, "Zero Tillage in the South," Biotechnology and Development Monitor, No 46, p13.

⁶⁹Leilani Gallardo, 2002, "Monsanto to tie up with 3 RP firms for BT Corn sale," Business World (Philippines), December 4, 2002.

⁷⁰see <<http://www.btinternet.com/~nlpwessex/Documents/usdagmeconomics.htm>>

⁷¹Leilani Gallardo, 2003, "Govt may grant subsidy for Bt corn Seed purchases," BusinessWorld (Philippines), January 6, 2003.

⁷²Rod Harbinson, 2003, "Zero Tillage in the South," Biotechnology and Development Monitor, No 46, p13.

⁷³Michiel Wackers 2002, "A look at how many biotech bucks make it into politics", CropChoice News, 20 February 2002.

⁷⁴Based on data released by the U.S. FEC on Tuesday, February 25, 2003, Monsanto Co 2002 PAC Summary Data, <Opensecrets.org>.

⁷⁵Karen Branch-Brioso, 2002, "Ashcroft and his donors: Did Monsanto buy itself an attorney general?" St. Louis Post-Dispatch, 2 April 2002

⁷⁶John Vidal, 2002, Biotech firms could have undue influence, say critics, 1 February 2001.

⁷⁷GreenBloc, 2000, Monsanto Employees and Government Regulatory Agencies Are The Same People! 8 December 2000.

⁷⁸Washington Post, 7 February 2001.

⁷⁹GreenBloc, 2000, Monsanto Employees and Government Regulatory Agencies Are The Same People! 8 December 2000.

⁸⁰Meryl Nass, MD, 2002, "Monsanto's Agent Orange: The Persistent Ghost from the Vietnam War," Organic Consumers Association.

⁸¹William Sanjour, 1994, The Monsanto Investigation, Memorandum to David Bussard, Director Characterization and Assessment Division, U.S. EPA.

⁸²Kemner, et al v Monsanto Co., No. 80-L-970, In the Appellate Court of Illinois Fifth District, Plaintiffs-Appellees' Brief, October 3, 1989.

⁸³Peter Sills, 1998, Toronto Globe and Mail. See page 256, The Ecologist. Sept/Oct 1998.

⁸⁴U.S. EPA Regulatory Branch, 1990.

⁸⁵William Sanjour, 1994, The Monsanto Investigation, Memorandum to David Bussard, Director Characterization and Assessment Division, U.S. EPA.

⁸⁶Ronnie Cummins, 2001, "Monsanto and Fox TV unite to Suppress Journalists' Free Speech on Hazards of Genetically Engineered Bovine Growth Hormone (rBGH or rBST)" Pure Food Campaign, Minnesota, U.S.A.

⁸⁷Michael Colby, 1998, Food & Water Journal, Summer 1998.

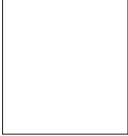
⁸⁸"Monsanto Accused of "Dirty Tricks" in Attempting to Discredit GE Corn Critics" The Ecologist, from Agribusiness Examiner, May 7, 2002 #160.

⁸⁹Virginia Lee, 2002, Common Ground Interview with John Robbins, Common Ground.

⁹⁰Michael Colby, 1998, Food & Water Journal, Summer 1998.

⁹¹Professor Nanjundaswamy, International Call to Action: Monsanto on the Ropes, Karnataka State Farmers Association.

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Masipag is a Farmer-Scientist partnership that promotes genuine development of farmers through a pro-poor, sustainable approach. With over 30,000 farmer-members, MASIPAG's work proves that even without the use of dangerous GMOs, farmers have a means of producing safe, clean and nutritious food with yields exceeding those of conventional farming in a manner that is profitable for them.

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Snippet of Monsanto Comic taken from "Hiwa-hiwalay na butil ng pangarap," Monsanto Philippines Inc, Vol 1, No.1, March 2003.
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