

Notes from a book on Genetically Engineered Food
From Paul McCartin

Seeds of Deception
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Frances Moore Lappé (foreword): this is undemocratic
we did not ask for GE food
it was introduced in secret
we are being kept in the dark

The book begins with a detailed account of the Arpad Pusztai story who was sacked after publishing his research which indicated that GE foods harmed rats.

UK government earmarked \$22 million in aid for British bio-tech firms (1999)
Government leaders prepared an initiative to win back public confidence in GM foods

FDA believes it is unnecessary to conduct comprehensive scientific reviews of foods derived from bioengineered plants

Monarch butterflies died when they came into contact with pollen from corn engineered to create its own pesticide.

In 1996 Monsanto scientists published a feeding study that purported to test their soybeans' effect on rats, chicken, ...

The study was designed to avoid finding problems.

The study did reveal significant differences between Roundup ready and natural soy.

Years after the study appeared a writer obtained data that had been omitted from the published paper. GM soy has significantly lower levels of protein, etc.

Many of the rats that ate GM tomatoes developed lesions in their stomachs. 7 of the 40 rats fed GM tomatoes died unexpectedly within 2 weeks.

80% of the soy and 38% of the corn planted in the US in 2003 is GE.

Derivatives from the two crops are found in 70% of processed foods.

70% of the cotton crop and 60% of the canola crop, both used for cooking oil, are GE.

Center for Disease Control says food is responsible for twice the number of illnesses in the US as scientists thought just 7 years ago. At least 80% of the food-related illnesses is caused by viruses or other pathogens that scientists cannot identify.

Among Britain's top research universities dependence on private funds often amounts to 80 to 90% of the total research budget.

A poll of 500 scientists working in either government or recently privatized research institutes in the UK revealed that 30% had been asked to change their research conclusions by their sponsoring customer.

The sweetener aspartame is GE

165 peer-reviewed studies were conducted on it by 1995

about half found no problem

about half raised questions about its safety

all those that found no problem were paid for by the manufacturer

all those paid for by non-industry and non-government sources raised questions

The manufacturer = GD Searle, a wholly owned subsidiary of Monsanto at the time

Pusztai says the situation is like the tobacco industry

They knew about the dangers of tobacco but suppressed the info

They created misleading evidence to show the problem wasn't serious

Several examples of wild animals and cows eating natural crops but avoiding GE crops.

In 1985 pigs were engineered with a human gene that produces human growth hormone.

The aim was to produce faster-growing pigs.

Many of the piglets born with the growth hormone were deformed or diseased.
(If we eat these pigs we are eating human genes. Does this make us cannibals?)

Scientists engineered tobacco to produce a particular acid but the plant also created a toxic compound not normally found in tobacco.

Tens of thousands of acres of GE cotton malfunctioned

Yeast engineered to increase its fermentation, increased levels of a naturally occurring toxin by 40 to 200 times

Scientists can even synthesize genes that don't exist in nature

George Wald, Nobel Laureate in Medicine and former Higgins professor of Biology at Harvard, says GE presents probably the largest ethical problem that science has ever had to face

Scientists were absolutely sure that each gene had only one function but they were wrong

Barry Commoner, senior scientist at the center for the Biology of Natural Systems at Queens College, says that the fact that one gene has more than one function destroys the foundation of a multi-billion-dollar industry, the GE of food crops.

The GE process can damage native genes in ways that the engineer may not be able to identify

DNA instability is a common feature of GE.

Many scientists are concerned that GE could result in new and dangerous antibiotic-resistant diseases.

The foreign gene or native genes in its vicinity can have their functions shut off.

A foreign gene can mistakenly be positioned in the middle of a native gene.

Research indicates that GE can create highly virulent new viruses.

Most foreign genes used in GM crops are not natural. They are synthetic.

Synthetic genes have been assumed to be equivalent.

But there are many differences that have been ignored.

The bacterial genes used in Bt crops and Roundup Ready soy and corn are changed a great deal.

Inserting the same gene into different varieties of the same plant species can have widely varying results.

Sometimes the process of GE results in a rearranged sequence of genetic information.

One version of Monsanto's New Leaf potato was stacked with eight different traits
Canola plants in Canada ended up with foreign genes from two different companies due to cross pollination.

Monsanto submitted herbicide-tolerant corn to the UK Advisory Committee on Releases into the Environment for a safety assessment.

The Committee accused Monsanto of sloppy research and said Monsanto was incompetent.

The corn had already been approved in the US.

400 pigs used in the US for bioengineering research may have entered the food supply because they were sold to a livestock dealer instead of being destroyed.

11 GE piglets were accidentally ground into poultry feed.

Unapproved crop varieties have ended up in food: e.g. Starlink (which came to Japan)
GM crops engineered to produce pharmaceuticals or industrial chemicals have contaminated nearby fields.

Monsanto discovered that two additional gene fragments had been inserted into Roundup Ready soy DNA accidentally.

Greenpeace: After years on the market, Monsanto reveals that neither the industry nor the regulators actually know what genes are in it.

Examples of required tests researchers did not conduct.

No adequate test has been devised for potential allergies.

The unexpected production of toxic substances has been observed in GE bacteria, yeast, plants and animals.

Monsanto tried to bribe Canadian officials to approve recombinant (GE) bovine growth hormone.

Files critical of scientific data provided by Monsanto were stolen from a scientist's office.

When cows were studied in an evaluation of rbGH, those that developed infections were dropped from the study, skewing the conclusions. Monsanto said only a handful of cows were infected, but documents obtained through Freedom of Information revealed that 9,500 were infected.

Dr Margaret Miller worked for Monsanto before going to FDA. There she wrote the FDA opinion on why milk from rbGH-treated cows should not be labeled.

A law firm sues dairies with 'rbGH-free' labels.

An FDA official said the agency had never examined the raw data from Monsanto's study of rbGH but rather based its conclusions on a summary provided by Monsanto. This violated the FDA's own procedures.

Some rats fed rbGH developed cysts.

RbGH cows had more difficulty getting pregnant.

Japan does not allow rbGH.

The US government defends rbGH by saying milk production will increase and prices decrease.

But in 1986-1987 the government paid farmers to stop dairy farming for 5 years in an attempt to stop overproduction and to boost prices.

FDA officials received financial incentives from the companies they were supposed to regulate.

In 1969, a congressional study showed that 37 of 49 top FDA officials who left the agency took jobs with food and drug companies.

150 FDA officers violated federal 'conflict of interest' rules by owning stock in drug companies the agency was monitoring.

Several FDA officials were convicted on corruption, racketeering and similar charges for a bribery scheme. Generic drug companies paid off FDA officials to approve their drugs and block approval of competitors' drugs.

L-tryptophan

Only 6 manufacturers, all Japanese, supplied it to the US.

Only that made by Showa Denko was associated with illness.

It had high levels of impurities.

There were 60 contaminants in it.

The FDA knew that the contaminated L-tryptophan was created by GM bacteria, but withheld the info from the public.

5,000 to 10,000 people became ill and about 100 died.

Showa Denko seems to have destroyed some evidence of contamination.

Monsanto had assured the public that Agent Orange was safe for humans.

Monsanto declared that their electrical insulator poly-chlorinated biphenyls (PCBs) were safe. They have been linked to cancer and birth defects and are now outlawed.

Monsanto knew of the dangers from PCBs but covered them up.

Monsanto has huge influence. They dictated policy to the Agriculture Department (USDA), Environmental Protection Agency (EPA), and FDA.

Attorney Michael Taylor oversaw the development of FDA policy. Prior to working at the agency he worked at a law firm where Monsanto was his personal client.

He later became Vice President for Public Policy at Monsanto.

FDA administrators instructed their scientists to subject GM foods to a lower safety standard than that normally applied to food additives.

More than half the drugs approved by the FDA between 1976 and 1985 had severe or fatal side effects that had not been detected during the agency's review and testing.

The Food, Drug and Cosmetic Act specifically bars the FDA from including any info about pesticides on its food labels.

FDA has stopped using the term 'substantially equivalent' in connection with GM foods.

FDA allows companies to determine if their products are safe.

Three pharmaceutical companies withheld pertinent info or simply fed the FDA false data.

Studies revealed that the drugs Aldactone and Flagyl were correlated with cancer in test animals. The manufacturer, Searle, had known this but had given the FDA false data.

An FDA scientist found instances of fraud by Monsanto. They had submitted false info to the EPA.

Campaign contributions by Monsanto and company.

In 1994, 181 congressmen co-sponsored a bill requiring labeling of GM foods. The 12-member Dairy Livestock and Poultry Committee stalled the bill. The 12 men

collectively took money from companies with dairy interests, with 4 taking money directly from Monsanto.

Mickey Kantor, former secretary of the Department of Commerce, was a personal friend of Monsanto CEO Shapiro. Kantor became trade representative of the US and later a member of Monsanto's board of directors.

William Ruckelshaus, former chief administrator of the EPA, also became a board member.

A former EPA employee, Linda Fisher, became vice president of government and public affairs for Monsanto before returning to the EPA to become their second in command.

Lidia Watrud, former biotechnology researcher at Monsanto, joined the EPA's Environmental Effects Laboratory.

At the FDA two former Monsanto employees along with Michael Taylor approved Monsanto's GE bovine growth hormone — which no other industrialized nation has yet deemed safe for their cows or milk drinking population.

To navigate Washington's complex bureaucracy, Monsanto looks to their director of international government affairs, Marcia Hale, who had been assistant to the president of the US.

Monsanto's director of global communication, Josh King, was formerly the director of production for White House events.

In the Bush Administration:

Agriculture Secretary Ann Veneman was an attorney at a firm that represented biotech corporations. She was on the board of Calgene, Inc., now a subsidiary of Monsanto.

Defense Secretary Donald Rumsfeld was president of Searle, a Monsanto subsidiary.

Mitch Daniels, director of the office of management and budget, was vice president at

Eli Lilly Pharmaceutical company, partners with Monsanto on the GE bovine growth hormone.

Tommy Thompson, secretary of health, received \$50,000 from biotech firms during his earlier Wisconsin gubernatorial election.

John Ashcroft, attorney general, was the largest recipient of campaign funds from Monsanto in the 2000 election.

Clarence Thomas, Supreme Court judge, once was Monsanto's lawyer.

GM potatoes and tomatoes have been taken off the market.

GM sugar beet, flax, and rice were approved but never commercialized.

With the lower profitability of GM crops, loss of foreign trade, lower market prices, costs of the StarLink corn recall, the farm subsidy rise, and lost organic market opportunities, GM crops could have cost the US economy some \$12 billion from 1999 to 2001.

In 1999 English scientists discovered that soy allergens skyrocketed over the previous year, jumping 50%.

At the moment no allergy tests are carried out before GM foods are marketed.

Masaharu Kawata said Japanese scientists found incomplete data in Monsanto's application for approval of Roundup Ready soy in Japan.

Employees at Monsanto's experimental dairy farms applied more than 150 applications of a wide array of veterinary medicines not approved for dairy cattle by the FDA.

Monsanto filed lawsuits against two small dairies to force them to stop labeling their milk as rbGH-free.

Monsanto created a 'hit squad' to identify and stifle reporters and reports critical of rbGH.

Roundup ready seeds had fewer isoflavones which are protective against cancer, heart disease, etc.

Farmers spray 2 to 5 times more herbicide on their GE soybeans compared to farmers who grow conventional beans. The government increased the level of Roundup residue allowed on beans by 3-fold.

Golden Rice, engineered to make its own beta-carotene, is promoted as the answer to vitamin A deficiency. But a 2-year-old child would need to eat 7 pounds per day. This is intentional deception.

Canola was produced from rapeseed by mutagenesis = subjecting a plant to radiation.

Vitamin C is often made from corn and vitamin E from soy.

The only human GM trial confirmed that GM DNA did transfer to bacteria in the gut. Many scientists had denied this was possible.