

Exposing Biotech's Big Lies

Quotes of the Month:

“The genetically engineered crops now being grown represent a massive uncontrolled experiment whose outcome is inherently unpredictable. The results could be catastrophic.”

Dr. Barry Commoner, “Unraveling the DNA Myth: The Spurious Foundation of Genetic Engineering”
Harpers magazine, February 2002

“Nobody can afford to efficiently and affordably provide two different products...We'll either go biotech or we won't. This is a war that we will win-or that we will lose.”

Gene Grabowski, Grocery Manufacturers of America.
Quoted in the book, Dinner at the New Gene Café,
by Bill Lambrecht (St Martin's Press 2001)

“[We're facing] a slow down of at least three to five years in North America...But in Europe the story will be one of using conventional breeding techniques... [In some cases] it will take at least 10 years to develop the new [GE] varieties and win consumer acceptance for them.”

Heinz Imhoff, Novartis Seeds, quoted in Galloping Gene Giants, by Tony Clarke and Brenda Inouye,
February 2002 <www.polarisinstitute.org>

Frankenfoods:

Beginning or End of the Biotech Century?

Despite repeated claims by the agbiotech industry that they are conquering the world, the global controversy over genetically engineered (GE) foods and crops continues. Are consumers about to roll over and accept drug and chemical companies controlling our food choices? Are the world's two billion farmers and rural villagers willing to become mere “bioserfs” in the employ of Monsanto and the Gene Giants? Or are we about to head in the opposite direction, away from industrial agriculture and genetic engineering, toward a future of organic farming, holistic health, and sustainable development? A review of a number of important developments on the consumer, science, and regulatory fronts indicate that agricultural biotechnology, far from being triumphant, is in deep trouble.

Reading the mainstream press, it's hard to find anything critical of genetic engineering. The public interest think tank, Food First, released a report April 29 demonstrating that 13 of the US's

major newspapers and magazines “have all but shut out criticism of genetically modified (GM) food and crops from their opinion pages.” www.organicconsumers.org/corp/usnewsbias043002.cfm

In January the biotech industry boasted that global acreage of GE crops had increased 18% in 2001 over the previous year. In BioDemocracy News #38 www.organicconsumers.org/newsletter/biod38.cfm we argued that this supposed “increase” in global Frankencrops is misleading, since it is based upon multi-billion dollar US government subsidies and below market cost dumping of Monsanto's Roundup Ready soybean seeds in Argentina. In March, the US Department of Agriculture predicted that the US's GE crops in 2002 would increase to include 74% of all soybeans, 32% of corn, and 71% of cotton. In addition, 15% of US dairy cows are being injected with Monsanto's controversial recombinant Bovine Growth Hormone (rBGH), while two-thirds of the Canadian and US canola crop is GE.

In early May, CEO Hendrick Verfaillie told Monsanto stockholders that the company could increase revenues by up to a billion dollars next year due to anticipated victories on the global regulatory front including: approval of their Bt cotton for cultivation in India; an “expected” approval for planting Roundup Ready soybeans by a Brazilian appeals court; approval in the US for a rootworm resistant corn and new GE cotton seed; and a loosening of EU import restrictions, where a de facto moratorium on new GE crops has been in place for four years. (St. Louis Post-Dispatch 5/3/02)

Yet despite Monsanto's rosy predictions, a March 28 Greenpeace report, “Risky Prospects” points out that the agbiotech industry is in the doldrums. www.organicconsumers.org/gefood/GreenPeace032802.cfm Despite projections made five years ago by Monsanto and the White House that most countries would soon adopt biotech farming, basically only four countries are currently cultivating gene-altered crops (US, Canada, and Argentina, with 96% of total acreage; and China with 3%). In addition, only two crops, soybeans and corn, account for a full 82% of all global acreage, while two others, cotton and canola, account for 17%. In the year 2000, the seeds of one company, Monsanto, made up 91% of all GE crops, while, for all practical purposes only two other Gene Giants have products on the market, Syngenta (formerly called Novartis/AstraZeneca) and Aventis (now owned by Bayer).

While total sales of agbiotech seeds and rBGH will amount to less than \$5 billion this year, global organic food sales will be five times greater or \$ 25 billion. While only four countries are growing GE crops on any scale, farmers in 130 nations are now producing and exporting certified organic foods and crops. At the current annual 24% growth rate of the organic sector in the US, organic farming will make up over 50% of US agriculture by 2020. And of course, if current consumer and regulatory trends continue, Frankencrops will be driven off the market long before organic becomes the norm.

Lies and Damn Lies on the Biotech Front

PR flacks and gene engineers are generating more and more column inches of print every month on the “marvels” of GMOs (genetically modified organisms) and the “scaremongering” or “irrationality” of its critics. The problem with this propaganda offensive is that Frankenfoods proponents, lacking solid evidence, are resorting more and more to outright lies and distortions to make their case. Lies and distortions include statements that all biotech foods have been properly safety tested (none have been), that biotech crops increase yields (the world's dominant biotech crop, Roundup Ready soybeans, decreases yields) or that new crops like Golden Rice will solve the nutritional deficiencies of the world's poor. When the public learns that a malnourished child would have to eat 15 pounds of Golden Rice every day to meet their needs for vitamin A, the Gene Giants will find their already limited credibility diminished even further. Another case in point is the recent scientific controversy over the genetic pollution of traditional corn varieties in Mexico, resulting from the US dumping six million tons of unwanted GE corn on Mexico annually.

In November 2001, the prestigious scientific journal Nature published an article by University of California scientists Ignacio Chapela and David Quist indicating that GE corn, despite a supposed government ban on planting, had polluted non-GE corn varieties in over a dozen communities in Southern Mexico. The article, widely publicized in the media, fueled global criticism of the “genetic pollution” or gene flow of GE crops and led to calls for banning the planting of GE crops in areas of genetic origin and high diversity (i.e. corn in Mexico and Meso-America, canola in Canada and Europe, soybeans in Asia). For more on this see BioDemocracy News #37.

www.organicconsumers.org/newsletter/BiodNews37.cfm

But after intense pressure by the biotech industry and pro-biotech scientists, Nature's editors issued a retraction, or rather a partial retraction, of Chapela's article on April 4, stating that the article “should not have been published.” News media all over the world, encouraged by PR firms working for Monsanto and other companies, reported Nature's retraction as a “big public relations victory for the biotechnology industry”

(Associated Press 4/18/02) and as, one pro-GE scientist stated, a “testament to the technical incompetence” of biotech critics (New York Times 4/5/02).

The fundamental problem with most of these post-April 4 media reports, the biggest story of the year so far on a biotech, was that they were wrong. Most reporters and editors either didn't read the Nature “retraction” closely or else didn't understand what they were reading, since even the critics of Chapela and Quist did not contest their central research conclusions—that indeed widespread genetic pollution of traditional corn varieties has occurred in Mexico. Instead critics were simply contesting whether or not gene-altered DNA constructs, once they had polluted traditional corn varieties, were then “fragmenting and promiscuously scattering throughout genomes.”

On April 18, Chapela and Quist's findings were vindicated when the Mexican government announced at a biosafety convention in the Netherlands that massive GMO contamination of traditional varieties had indeed occurred, not only in Oaxaca, but also in the neighboring state of Puebla. According to Jorge Soberon, executive secretary of Mexico's biodiversity commission, the level of contamination “was far worse than initially reported.” (London Guardian 4/19/02) Up to 95% of corn plots were contaminated by gene-altered DNA. In one field 35% of all plants

were contaminated, and overall 8% of all kernels examined were contaminated, showing that genetic pollution or cross-pollination had occurred, according to Soberon, “at a speed never before predicted...This is the world's worst case of contamination by genetically modified material because it happened in the place of origin of a major crop. It is confirmed. There is no doubt about it.” (Daily Telegraph, UK 4/19/02).

Explosive news, especially when millions of acres of genetically engineered rapeseed (canola) and corn are polluting non-GE varieties and plant relatives across the US and Canada right now. The problem is that while this alarming news made headlines in Europe and Mexico, in the US and Canada it was all but ignored by the media.

The Big Lie: Biotech Foods, Crops, and Nutraceuticals Are Safe

The biotech industry's recent corn disinformation campaign is simply the latest installment of the Big Lie, repeated ad nauseum, that genetically engineered foods and crops, as well as their new “pharm” products, are safe for human health and the environment. Although Biotech's Big Lie, aided and abetted worldwide by governments' refusing to carry out any serious safety-testing of GE foods and crops, keeps being regurgitated in the press, the truth continues to emerge, albeit in bits and pieces or in heavily-censored form. Even a brief summary of a dozen biotech disasters and near-disasters over the past decade is enough to take your appetite away.

(1) L-tryptophan. A major new growth industry for the Gene Giants is expected to be nutraceuticals, GE-enhanced foods and nutritional supplements. As with their Frankenfoods, the biotech companies tell us these products are completely safe. Unfortunately the first GE nutraceutical to hit the market, L-tryptophan, killed at least 37 Americans and injured thousands of others in 1998-89. After hundreds of thousands of people had taken non-GE L-tryptophan for decades with no ill effects, a Japanese drug company decided they could make more money by genetically engineering the popular over the counter supplement. Apparently the more GE bacteria the company, Showa Denko, used in the manufacturing process, the more toxic the L-tryptophan became. www.netlink.de/gen/druker1.html

(2) Another new future product being touted in the press are “safer” cigarettes produced through genetic engineering. Unfortunately the track record of the tobacco giants in this area is rather questionable. GE “Y-1” cigarettes were developed by DNA Plant Technology corporation of Oakland, CA. in the 1980s. Y-1 tobacco was illegally grown between 1990-98 and surreptitiously placed into five popular brands including Pall Malls, Viceroy, and Lucky Strikes, by tobacco giant Brown & Williamson. These gene-altered cigarettes contained world record amounts of nicotine, which made it extremely difficult or impossible to quit. Millions of packs of these GE cigarettes were shipped to Asia, the Middle East, and Western Europe. The death toll of those who smoked these GE Y-1 butts, especially those who thought they were smoking low-tar brands as a step on the road to quitting, is unavailable. The tobacco, called *fuomo loco*, by the Brazilian farmers who grew it, reportedly had such a strong narcotic effect that it made farmers dizzy when they handled it. See www.OrganicConsumers.org/Patent/getobacco0402.cfm

(3) Another major growth area for biotech will be industrial “pharming,” using genetic engineering to produce industrial chemicals such as ethanol, or pharmaceutical drugs such as vaccines in plants or animals. Again agbiotech's track record here leaves one in doubt about the safety of these new miracle prod-

ucts. In 1994 Oregon State University scientists found that a GE bacteria, *Klebsiella planticola*, designed to produce fuel-grade ethanol from crop wastes, and being readied for commercialization by a European biotech company, completely destroyed the root systems of plants exposed to the bacterium. If *Klebsiella planticola* had been commercialized and released into the environment, vast expanses of farmland could have been rendered infertile forever, according to Dr. Elaine Ingham, author of the study. www.organicconsumers.org/ge/klebsiella.cfm In another eye-opener on the "pharm front," a Pfizer drug company official, Chris Webster, admitted at an April 2000 FDA meeting that "modified live [vaccine] seeds have wandered off and have appeared in other products." See page 77. www.fda.gov/cber/minutes/plnt2040600.pdf

(4) Monsanto's recombinant Bovine Growth Hormone, forced onto the US market in 1994 despite widespread consumer and farmer resistance, contains high levels of a cancer tumor promoter called IGF-1. Data previously concealed by Monsanto and the FDA, leaked by government scientists in Canada in 1998, indicated that rBGH caused cysts on the thyroid glands and infiltration into the prostate of lab rats-both warning signs for potential cancer. Genetically engineered BGH is banned in every industrialized country in the world, except for the US. Currently injected into 15% of all US dairy cows, rBGH milk is then surreptitiously commingled by leading dairies into most fluid milk in the US. (rBGH is banned in organic production.) www.organicconsumers.org/rbghlink.html

(5) In 1995 scientists found that GE enzymes used to speed up fermentation in yeast were producing a 40-fold to 200-fold increase in a toxic and mutagenic substance called methylglyoxal. (Inose, T. and K. Murata. 1995. Enhanced accumulation of toxic compound in yeast cells having high glycolytic activity: A case study on the safety of genetically engineered yeast. *International Journal of Food Science and Technology*, 30: 141-146.)

(6) In 1996, a Pioneer-Hybrid soybean, spliced with Brazil nut DNA, was pulled from commercialization after Nebraska scientists discovered it could set off life-threatening allergies in humans. Earlier feeding tests on animals, considered a stringent testing procedure, had not indicated its allergenicity. www.organicconsumers.org/neweng.html

(7) In the late 1990s studies conducted by Dr. Arpad Pusztai in Scotland showed that potatoes, gene-spliced with a substance called lectin from a snowdrop plant, caused major damage to laboratory rats-suppressing their immune systems, damaging vital organs, and producing what appeared to be a severe viral infection in their stomach linings and digestive system. After going public with his test results, Pusztai was fired from his lab and denigrated by the biotech establishment. Despite recommendations by the British Royal Society that Pusztai's research should be continued, the British government and the biotech industry have refused to provide the funds to carry out these tests. www.organicconsumers.org/ge/pusztaihalt.cfm

(8) In September 2000, an illegal and likely allergenic variety of GE corn, called StarLink, was found to have contaminated almost 10% of the entire US corn harvest, prompting a massive recall of 300 brand name products and a temporary shutdown of major overseas markets for US corn. Since then hundreds of America consumers have complained to the FDA of allergic reactions after consuming foods likely containing genetically engineered corn. www.organicconsumers.org/ge/hansenstarlink.cfm

(9) German researchers in 2000 found that antibiotic resistance marker (ARM) genes from GE rapeseed (canola) were transferring their resistance to the bacteria found in the guts of bees that had consumed the pollen of these gene-altered plants. Earlier studies in the EU found that antibiotic resistance genes found in gene altered foods and crops could likely transfer into bacteria in the human gut as well as soil bacteria. www.organicconsumers.org/ge/genemarker.cfm In 1999 the British Medical Association called for a

global moratorium on GE crops, citing the danger of ARM genes causing disease germs to develop antibiotic resistance.

(10) After years of reports that animals on Mid-West farms were shunning GE corn, a Dutch student in 2001 carried out feeding studies of GE corn and soya to rats and found significant weight loss and behavioral differences.

www.organicconsumers.org/newsletter/BiodNews37.cfm

(11) The medical journal *Cancer* revealed in 1999 that foods with residues of glyphosate, the active ingredient in Monsanto's Roundup herbicide-sprayed in heavy doses on herbicide resistant crops, are a possible hazard for an increasingly common form of cancer, non-Hodgkin's Lymphoma. Aventis' Glufosinate, another herbicide sprayed widely on GE crops, has also been linked to birth defects, learning disabilities, and abnormal behavior in children.

www.organicconsumers.org/Monsanto/glyphocancer.cfm

www.pan-uk.org/pestnews/actives/glufosin.htm

(12) The toxic weed killer bromoxynil, sprayed in heavy doses on Aventis' herbicide-resistant cotton plants (and ending up in cotton seed and vegetable oils) has been classified by the EPA as a possible human carcinogen and has been linked with liver tumors, spinal and skull defects, reduced fetal weight, and developmental disorders in human fetuses. www.ucsusa.org/food/epa.may97.html

Unfortunately the list of biotech horrors could go on and on. One future revelation, assuming it ever comes out in the mass media, that will tarnish the "safe" image of genetic engineering, is the fact that the deadly anthrax spores sent through the US mails last year were genetically engineered, and that the likely culprit was not an Arab terrorist, but rather a US biowarfare scientist working for the military. www.organicconsumers.org/corp/anthrax022502.cfm

In terms of environmental hazards, GE crops are polluting organic and non-GE crops; damaging soil fertility; killing beneficial insects and soil microorganisms; creating Superpests and Superweeds; and threatening to undermine the utility of non-GE biopesticides such as Bt sprays. Use the search engine on our website www.organicconsumers.org to find out more about the environmental damage of Frankencrops.

With a track record like this no wonder 350 million Europeans, 125 million Japanese, and 50 million Koreans are refusing to eat Frankenfoods. No wonder more and more consumers, even in the North American heartland of biotech, are demanding mandatory labeling in order to avoid possible harm to themselves or their families. No wonder organic farmers in Canada are suing Monsanto and Aventis. No wonder the Bush administration fears that US/EU trade disputes over labeling, safety testing, and patenting of GMOs could destroy the free trade regime of the World Trade Organization.

Global Food Fight: Who's Winning?

* Reuters reports (5/3/02) US corn sales to Korea fell 55% (from 2.1 million tons to 1.1 million) over the past year, while falling 6% to Japan (from 16.3 million tons to 15.3 million) due to the controversy over GE crops. This comes in the wake of the US losing its entire \$200-400 million annual market for corn in Europe and Canada losing its \$400 million annual canola market in Europe.

* China agreed in March to once again accept imports of genetically engineered US soybeans while it evaluates the safety of the beans under new Chinese rules for GE crops. Soybean exports from the US (which total a billion dollars a year) were suspended in February, throwing Monsanto, grain traders, and the White House into a panic. China bought 5.2 million tons of US soybeans in 2001, out of total US exports of 27 million tons. China still remains skeptical,

however, about planting GE crops in the country, with the exception of Bt cotton. China has recently been selling more and more non-GE corn and other crops to Asian and EU buyers. A recent poll in Hong Kong found 90% of Chinese consumers want GE foods labeled.

* Brazil has increased its global market share of soybeans over the last two years, from 24% to 30%, while the US market share has declined from 57% to 46%. A farming association recently said that it would be "very foolish" for Brazil to authorize GE crops, for "we would risk throwing away a market we have worked very hard to win". (The Guardian, UK 4/17/02)

* European market developments. France has increased its non-GMO soya imports from Brazil five-fold, while French feed industry giants are demanding that suppliers label products as GE or non-GE. German feed dealers are turning to Brazil also. The majority of EU animal feed will likely be GE-free within the next two years. The latest EU Commission poll found 80% of Europeans opposed to GE food.

* Eastern European nations, such as the Czech Republic and Croatia, are also starting to buy non-GE soya from Brazil. Croatia is considering an outright ban on GMOs, while mandatory labeling is required in the Czech Republic. The 13 countries in Eastern and Central Europe applying for admission to the European Union are all realizing that planting and importing GE crops from the US and Canada is a risky proposition-given that they will all eventually be covered by EU regulation of GE crops, including strict labeling and safety testing requirements.

* Other regulatory developments. Thailand, the world's largest rice exporter, is expected to introduce labeling legislation this year. Australia and New Zealand have adopted mandatory labeling for GE food, which came into force in December 2001. Bolivia passed a law in 2001 prohibiting the import and use of any GMOs for one year. In Paraguay, the use of GE soybeans in the agricultural sector was banned in 2000/2001. In the Philippines there are a number of bills before the Senate and Congress concerning the labeling of GE crops. Labeling legislation is also in preparation in Hong Kong, Israel, Mexico and Brazil. GE food labeling is already mandatory in Indonesia, Latvia, Saudi Arabia, Switzerland and Norway. Public interest groups in Mexico have called for a halt to all US corn exports to Mexico, while the Canadian Parliament is discussing a mandatory labeling law.

* According to the Greenpeace report "Risky Prospects," cited earlier, more than 35 countries have laws either in place or planned which require the labeling of food containing GE ingredients, or which restrict the import of some GMOs. These countries combined include more than half the world's population. Although the government opposes labeling, the latest US polls in 2001, by Rutgers University and ABC News, both found upwards of 90% of consumers support GE labels.

North America: Movement Grows Against Biotech

In North America protests against GE foods and crops are increasing. California is debating a bill to ban GE fish, while activists in Oregon are putting a measure on the November ballot to require mandatory labeling of GE food. Twenty-eight Vermont towns recently have voted for mandatory labeling and a ban on growing GE crops.

On Feb. 26-March 2 the Organic Consumers Association leafleted and protested against Starbucks in over 400 locations, demanding that the coffeehouse giant remove all rBGH and GE products from its cafes, as well as brew and promote Fair Trade coffee.

On March 12-14 the GE Free Market Coalition, which includes Greenpeace and the OCA, leafleted and protested at supermarkets across the US, with special emphasis on leading chains such as Safeway (East & West coasts), Shaw's (New England), A&P/Food Emporium (16 states including New York), Publix (Southeast), and Food Lion (East Coast & South). Another national day of supermarket protests will take place in 100 cities on June 8, coinciding with an activists' conference in Toronto, called Biojustice. The GE Free Market Coalition scored its first major victory last November 14, when Trader Joe's, an upscale supermarket chain agreed to remove all GMOs from its brand name products.

On April 17 the OCA and Global Exchange organized protests, "corn dumps" and press conferences in Canada, the US, and Mexico against US and Canadian corn dumping in Mexico, against untested, unlabeled likely hazardous GE corn being forced on consumers of food products, and for corn farmers throughout the Americas to be guaranteed a fair price for their corn. Farm, indigenous, and public interest NGOs (non-governmental organizations) throughout the continent, including Central America and Brazil also staged protests and land seizures on April 17-part of the Continental Campaign Against Transgenic Corn. Also on April 17 Canadian and US farmers called for a ban on the commercialization of genetically engineered wheat, now being field tested in Canada and the US.

On April 17-22 activists from the OCA and the Genetically Engineered Food Alert <gefoodalert.org> leafleted supermarkets in 200 US cities, part of a national campaign against Kraft and other US food giants. On April 22, Earth Day, GEFA activists staged a protest outside Kraft's annual shareholders meeting in East Hanover, NJ. Similar protests are planned throughout the coming year.

If you want to help leaflet supermarkets or Starbucks in your local community or join in the Kraft campaign contact simon@organicconsumers.org

The OCA is sponsoring an eco-organic tour to Chiapas, Mexico July 7-14, called Organic Communities Exchange. The delegation, limited to 15 people, will meet with organic farmers, women's organic garden projects, Fair Trade coffee coops, biodiversity activists, and autonomous indigenous communities. Besides getting a close look at the politics of food and biodiversity in the highlands of Chiapas, tour group members will visit Mayan ruins and community based eco-tourism projects. The OCA guarantees this will be an enjoyable, inspirational, and unforgettable travel experience. Costs for the seven-day trip will be \$800 (airfare not included). To reserve your spot, since space is limited, send a \$400 deposit check to the Organic Consumers Association, 6101 Cliff Estate Road, Little Marais, MN 55614. Or else call 218-226-4164 or email mexicotrip@organicconsumers.org

Stay tuned to BioDemocracy News and www.organicconsumers.org for the latest news and developments.