PUBLIC PROTESTS EXPAND AS GMOS AND BIOTECH WREAK HAVIC ON FOOD SUPPLY[1]

Shiv Chopra©

In the U.S., people spend proportionately the least amount of their earnings on food. However, the incidence of food-borne disease (FBD) there is the highest in the world. The closest example of another country in this regard is its northern neighbour and largest trading partner – Canada. The main source of food borne disease during the last 50 years traces to the misuse and abuse of the following five materials in food production: hormones, antibiotics, rendered slaughterhouse wastes, Genetically Modified Organisms (GMOs), and pesticides. The first three of these materials are banned in food production throughout the European Union. Yet the American and Canadian regulatory authorities insist that these substances pose no "significant" risk to public health. EU countries have also not approved GMO crops, and some Scandinavian members are undertaking to ban agricultural pesticides.[2]

The greatest threat to the security and sovereignty of any nation stems from the ongoing imposition of GMOs with their false claims of raising more abundant and nutritious food. The worst case in this instance is Iraq, where wheat was first cultivated 14,000 years ago. Modern farmers in Iraq are no longer permitted to save any wheat seeds for next year's sowing – except for the American GMO variety. Similar bans which favour only the GMO seeds are underway in other countries, including India. This applies to Indian crops such as Bt-cotton and Bt-Brinjal (eggplant, one of India's most important vegetables), without the necessary regulatory assessment of their harmful effects on public health.

The production and use of Genetically Modified Organisms is known to cause various adverse effects on the soil, animals, people, and the environment. But little or no attention is paid to these facts by most regulatory authorities around the world. Instead, they allow companies producing GMOs to make false claims, such as to feed the "hungry" world with more nutritious food.[3] Involved in these falsehoods are agronomists, toxicologists, economists, regulators, policy advisors, and political pundits of every stripe – all paying only lip service to the public interest.

Many adverse effects on the food chain trace back to genetically introduced tolerance in agricultural crops to highly toxic herbicides and pesticides, such as Round-up, Bt, and others. According to a five-year study (2002-2005) conducted in southern India, certain previously "unseen diseases like root rot increased from 0% to 40% in soils planted with Bt-cotton."[4] In 2003, approximately "2,500 sheep died after grazing in Bt-cotton fields," and "farmers who went to pluck Bt-cotton developed serious skin diseases and breathing problems." The author of this study, P.V. Satheesh, writes that India was forced to ban Monsanto's Bt-cotton cultivation for a while. However, under further pressure by industry, the ban was lifted in 2006, and all non-Bt cotton was "firmly" shut out of the market.

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1 Vitality - Toronto's Monthly Wellness Journal, July 2010

2 Shiv Chopra, Corrupt to the Core: Memoirs of a Health Canada Whistleblower, KOS Publishing, 2009.

3 Advertisement in The Economist, January 10, 2009

4 P.V. Satheesh: Introduction to the 2009 Indian edition of Genetic Roulette by Jeffrey M. Smith, Yes! Publications 2004.

In an article entitled "The Great Gene Robbery," Claude Alvares quoted a famous plant breeder: "He who controls the supply of rice will control the destiny of the entire Asiatic orbit."[5] A former U.S. Secretary of Agriculture, Earl Butz, stated: "If food can be used as a weapon we would be happy to use it." These statements were made during the Cold War years, but given the current U.S.-sponsored corporate control of the world's food supply, nothing appears to have changed since then. In fact, the corporate assault on the safety and security of food is becoming more aggressive.

Genetic engineering of life is among the least studied, and therefore least understood, subjects. GMOs are not like the hybrids produced from closely related species, such as a mule which is a cross between a horse and a donkey. A mule is hardier than both its parents and resembles them both; but it is genetically sterile in that it cannot parent another mule. Nor do GMOs result from a selective breeding within a given species to obtain high performance offspring, as is the case with dairy cows, race horses, poodles, or high yielding crops of wheat, rice, etc. GMOs are made by transgenic transfer of DNA fragments from one species of plant or animal into the genome of a totally unrelated species, such as from a human or a cow, to E. coli bacteria to obtain human insulin, or recombinant Bovine Growth Hormone (rBGH). Precisely the same technology is used to produce Round-up ready crops such as canola, soybean, corn, etc., and also Bt-cotton, Bt-corn, etc. Such transfers of DNA between unrelated species are facilitated on the backs of certain viruses – a dangerous practice. In effect, the entire process of laboratory-induced modification of any life form is against the laws of existence, which evolved over millions of years through prolonged processes of natural selection.

During the past three years, I have had the opportunity to discuss these issues with many audiences across Canada, Australia, New Zealand, and India. The single most important issue these countries are grappling with is whether or not to allow GMOs in food production, along the lines of the following advertisement from Monsanto: "How can we squeeze more food from a raindrop?" It claims that Monsanto's GMO products will "Produce more, conserve more," and "improve farmers' lives."[5] Bayer, Pfizer, BASF, Syngenta, Dow, and several other companies each have their own GMO products – and spin-doctors to promote them.

The problem that consumers face is getting the facts about the harmful effects of GMOs on human and animal health, given that their governments ignore these facts.

US Support for GMOs

Currently, the U.S. is the lead country that most aggressively supports GMOs for food production. It is the only major country where rBGH remains approved and farmers are not allowed to label uncontaminated milk as rBGH-free. Labeling was stopped by Monsanto's former vice-president, Michael Taylor, presently employed as "America's food safety czar" at the FDA. In the U.S., Monsanto's former top officials hold some of the highest offices in the country, and are found in top positions at USFDA, in the courts, and various other influential offices.[4]

Labeling of GMO-containing foods is a fiercely fought issue throughout the world. It is the only way that consumers can avoid such foods. The U.S. is determined to prevent such labeling. It regards GMOs as "substantially equivalent" to natural foods. The issue here is not only about GMOs in food, but also in drugs, vaccines, and other products now in development, such as meat and milk from genetically modified animals. For example, pork produced from a cross

[5] Claude Alvares, "The Great Gene Robbery", Illustrated Weekly of India, March 23, 1986.

between a pig and a mouse at the University of Guelph is a genetic monster being developed by researchers supposedly to produce less offensive manure than that of a normal pig. Genetically modified animals, such as cows and goats, are also being developed to procure therapeutic proteins to supposedly cure cancer and other diseases. According to the USFDA, meat and milk produced from such animals would be safe to consume. It argues that if any of these products were to be labeled as containing GMOs, nobody would use them.

Australia and New Zealand

In Australia and New Zealand, food safety is governed under a joint regulatory authority, called Food Standards Australia and New Zealand (FSANZ). The standards that FSANZ applies for food safety depend on the client: if the food is to be consumed locally, hormones and antibiotics are permitted; but for export to any EU country, it must be free of such materials. In other words, farmers may produce two types of food – the safest one for EU countries, and the not-so-safe for local consumption. rBGH was the only hormone that Australia and New Zealand avoided approving for local dairy milk production.

GMOs in Canada

Canada usually follows the USFDA on food and drug safety. The only GMO product for which Canada did not tow the U.S. line was rBGH in 1999. This is due to a decade-long battle against rBGH which my colleagues and I fought at Health Canada.

Monsanto's Roundup-ready canola was already approved in Canada in 1995. By 1997, approximately 25% of Canadian canola was grown from Monsanto's GMO variety, causing huge trade losses. Farmers, such as Percy Schmeiser who did not use GMO canola, annoyed Monsanto. Therefore, it sued Schmeiser all the way to the Supreme Court, alleging that he illegally saved Monsanto's patented GMO seeds from his crop for next year's crop, to avoid paying the licensing fee. But Schmeiser provided ample evidence to show that he never used any GMO seeds and that some had blown over into his fields from neighbouring farms. As the legal arguments involved patent rights rather than liability and trespass, the Supreme Court ordered the Canadian Government to update the patent law to reflect the properties of genetically engineered plants and animals. This has not yet happened. Eventually, Schmeiser won his case in a different forum (Globe and Mail, March 20, 2008), but it cost him half a million dollars to defend himself. Since then, he has travelled the world speaking on GMO issues, and recently won the Right Livelihood Award from the Swedish Government.

Meanwhile, GMO canola has become a superweed endangering other crops. A solution that some pesticide companies proposed was to reintroduce a previously banned carcinogenic herbicide (2,4-D) to control Roundup-resistant canola which are infesting non-canola crops, such as corn. In addition, Monsanto together with Dow proposed (and no objections raised by Health Canada) to usher in yet a new GMO called SmartStax, which would allow at once eight different pesticide-tolerant traits to be used together for weed-free farming of canola and other crops. So the public would now face health risks of multiples of eight different, genetically introduced, toxic traits in many more crops.

Interestingly, in 2009 a number of countries refused to accept Canadian exports of GMO-contaminated flax seed, canola, and peas. Those countries included Belgium, China, and India. This caused an uproar in Canada. Consequently, MP Alex Atamanenko (NDP) successfully introduced a private member's Bill (C-474) requiring mandatory study of the trade implications

prior to any approval of GMOs by Health Canada;[6] this Bill won parliamentary majority support and went before the Senate in April 2010. To support its successful passage, an NGO (CBAN) is encouraging people to contact their Senators and MPs.

Controversy in India

India is one of the world's largest agricultural countries. Approximately 70% of its 1.2 billion people are engaged in agriculture, compared to only 1.5% of 33 million in Canada. Recently, CNN reported that organic agriculture is proving to be a financial boon for Indian farmers.[7] But India's government is pondering whether to tailor its policies on GMOs along the lines of the EU, NAFTA, or in accordance with its native knowledge developed over millennia. So far, it has favoured the NAFTA model, and tried to ignore public opposition, as revealed by a series of administrations engaging in on-and-off policies regarding the approval of Bt-cotton, especially when faced with thousands of suicides by cotton growers ruined by failing GMO cotton crops.[8]

The most recent public opposition to the Indian government's policy on GMOs involved the approval of Bt-brinjal, (eggplant) which comes in many varieties – all of which are at risk when any one is GMO-contaminated. India's Genetic Engineering Approval Committee (GEAC) approved a GMO variety without proper safety assessment. I personally took part in this issue at the invitation of Kheti Virasat Mission, a non-governmental organization. Writing to the minister in-charge, Jairam Ramesh, we asserted that commercial cultivation of Bt-brinjal was not only an environmental or agricultural issue, but also concerned human health and should be duly assessed by the Ministry of Health.

Fortunately, Minister Ramesh took this point into consideration. He ordered an indefinite moratorium on the commercial cultivation of not only Bt-brinjal but also on all GMOs for food production. Days before this announcement, an American lobbyist, Nina Federoff, who is a Science and Technology Advisor to U.S. Secretary of State, Hillary Clinton, suddenly arrived in India to allegedly encourage a contrary outcome.[9] However, Minister Ramesh was undeterred.

Much to the consternation of Monsanto, a nation-wide public protest (reported in the world media) caused the much anticipated Bt-brinjal approval to bring back all those bad memories of the Bt-cotton disaster, and even Monsanto had to admit the widespread failure of that crop. It even recommended that farmers stop using the current Bt-cotton seed and use Monsanto's two new versions instead. Similar reports about Bt-cotton's failure are now emerging from China.[10]

Indian government authorities appear not to understand the basic difference between genetic engineering and biotechnology. The deleterious effects of genetic engineering on human, animal, and environmental health are impossible to predict. Strictly speaking, biotechnology applies to traditional plant breeding also. But the Indian government's hastily proposed "Biotechnology Regulatory Authority of India" (BRAI) intends to fast-track GMOs and at the same time silence public criticism of such foods, drugs, vaccines, and other harmful products. If adopted, this legislation could subject anyone who even criticizes GMOs to receive at least six months in jail. In my public lectures in India, I joked that such legislation would only help to

[6] Helke Ferrie, "The Intelligent Revolution", Vitality, April 2010

[7] http://edition.cnn.com/2010/WORLD/asiapcf/05/03/India.organic. boom

[8] Vandana Shiva & Kunwar Jalees, Seeds of Suicide (4th Edition): Navdanya, New Delhi, India, 2006.

[9] Kavitha Kuruganti, Kheti Virasat Mission, Faridkote, India.

[10] guardian.co.uk/environment/2010/may/13/gm-crops-pests-cotton-china

disseminate correct information on GMOs more rapidly, as tens of thousands of people would come together in jails for information sharing.

New legislation with similar intent keeps appearing in the U.S. and Canada, such as the current S-510 and Bill C-36 respectively. S-510 would stop people in the U.S. from exercising their right to grow, own, trade, transport, share, feed, and eat all food that nature makes. It would be an attack on people cultivating and consuming food of their own choice. It would also be unconstitutional and contrary to natural law. Like in India, these Bills pretend to ensure enhanced safety of food and drugs and consumer products generally. In fact, they only protect corporations seeking to escape liability for the harm their products do to public health and the environment.[11]

[11] Helke Ferrie, What Part of No! Don't They Understand? Rescuing Food and Medicine from Government Abuse. KOS Publishing, 2008.