

Canadians concerned about GMOs, choose organic foods

By Adam MacIsaac
Contributor

A new survey shows more Canadians are buying their food from health food stores because of concerns over genetically modified ingredients. The poll commissioned by the Canadian Health Food Association (CHFA) found that 95 percent of Canadians believe they should have the right to choose whether or not they buy foods containing genetically modified ingredients. But health product manufacturers increasingly complain that their attempts to inform consumers with labels are being thwarted by retailers. Genetically modified ingredients contain organisms whose genetic DNA (deoxyribonucleic acid) has been altered in a way that does not occur naturally by mating or natural recombination. Recombinant DNA technology, or genetic engineering, allows selected individual genes to be transferred from one organism into another, sometimes between non-related species. Genetic engineering is routinely

"...the use of GMO's in agriculture and the food industry is currently the focus of intense public and political debate."

used in thousands of research laboratories worldwide and has resulted in many new products and processes such as industrial enzymes and medicines such as insulin and vaccines. But the use of genetically modified organisms (GMO's) in agriculture and the food industry is currently the focus of intense public and political debate.

Genetic modification (GM) is quite misleading terminology, as "modification" means "change" and conventional breeding is constantly changing to produce new varieties. "Genetic modification" in agriculture refers to the recombinant DNA plant breeding technique. This is where genes are transferred from one organism to another, and the most common application is with cross kingdom breeding. For exam-

ple, bacteria and virus genes are used in genetically modified canola to produce chemical resistance. The genetic modification problems occur because consumers reject this type of plant breeding technique. If there was more open and honest debate we would be able to base decisions on facts, and it is difficult to find factual evidence that genetically modified crops (excluding cotton) will benefit anyone else other than the patent owner.

Non-GM farmers can be sued for getting contamination of crops under the Trade Practices Act and the Patent Law. Due to the high cost and liabilities arising from inevitable contamination, non-GM farmers will not be able to market as non-GM and consumers will not have a choice. Will farmers have a choice in the future if we cannot source uncontaminated non-GM seed? The Saskatchewan farmer Percy Schmeiser who recently visited P.E.I. in December knows the effects of crop contamination too well. Five years ago, Canadian law enforcement officials seized Schmeiser's entire canola crop from his 1,030-acre farm in Bruno, Saskatchewan, after Monsanto filed a legal complaint. Monsanto who is one of the leading biotechnology companies said that Schmeiser violated their patent rights on their genetically modified Roundup Ready canola by growing it without paying for the seed and without signing a technology use agreement. While agreeing that some of Schmeiser's fields contained Monsanto's genetically modified canola, he said that they were contaminated by a neighboring field and by seeds that blew off trucks on their way to a nearby canola processing plant.

Farmers are being promised the world with GM techniques, but careful assessment of what is actually being delivered must be made. Does the risk outweigh the benefits? Should non-GM research and development funding be compromised? There has been a lot of research on the benefits of GMO's by biotechnology companies such as Monsanto but the research of Arnold Puztai who is a leading United Kingdom scientist revealed some intriguing infor-

mation. First, the nutritional content of some genetically modified potatoes were considerably different from their non-GM parent lines, even though they were grown in identical conditions. One GM potato line, for example, contained 20% less protein than its own parent line. Second, even the nutritional content of sibling GM potatoes, offspring of the same parent grown in identical conditions, was significantly different. If Puztai's results were limited to just these facts, they alone might have undermined the entire regulatory process of genetically modified foods. FDA policy was based on the assumption that genetically modified foods were stable. Nutrient levels were not supposed to vary. But these findings were completely eclipsed by Puztai's other, more disturbing discoveries. He found that rats which were fed GM potatoes suffered damaged immune systems. Their white blood cells responded much more sluggishly than those of rats fed a non-GM diet, leaving them more vulnerable to infection and disease. Organs related to the immune system, the thymus and spleen, showed some damage as well. Compared to rats fed a non-GM control diet, some of the GM-fed rats had smaller, less developed brains, livers, and testicles. Other rats had enlarged tissues, including the pancreas and intestines. Some showed partial atrophy of the liver. What's more, significant structural changes and a proliferation of cells in the stomach and intestines of GM-fed rats may have signaled an increased potential for cancer. The rats developed these serious health effects after

only ten days. Some of these changes persisted after 110 days, a time period corresponding to about 10 years of human life.

According to a March 2001 article in the New York Times, "The CDC (Center for Disease Control) now says that food is responsible for twice the number of illnesses in the United States as scientists thought just seven years ago... At least

"The CDC now says that food is responsible for twice the number of illnesses...as scientists thought just seven years ago"

80% of food-related illnesses are caused by viruses or other pathogens that scientists cannot even identify." The reported cases include 5,000 deaths, 325,000 hospitalizations, and 76 million illnesses per year. This increase roughly corresponds to the period when Americans have been eating genetically modified food. In addition, obesity has skyrocketed. Over a third of Canadian children are overweight and, of those, half are considered obese, says Statistics Canada. Diabetes rose by 33% from 1990 to 1998, lymphatic cancers are up, and many other illnesses are on the rise. Is there a connection to genetically modified foods? We have no way of knowing because research has mostly been done by biotechnology companies which directly profit from the sale of genetically modified seed and the chemicals used.

THE WAVE

Purchase a
Rum & Coke
for a chance to win!

Captain Morgan white rum
Coke
Lemon wedge

Captain Morgan
RUM

DRINK
of the
WEEK

STAMP

Name: _____ Email: _____

Redeem @ The Wave for a chance to win \$1,000