

## **FLASH SHEET #9-Genetically Modified Organisms & Products-** **Gracia James Environment Convener**

Controversy surrounding further development and promotion of genetically modified organisms and products is boiling up around the world. At stake are many important issues such as:

\* Organic farmers are at risk of not being able to continue to call their crops organic, since genetically modified plant pollen and seeds can be blown into their fields from nearby farms eg. Organic oilseed rape ( canola) has virtually been wiped out in Canada, because of GM contamination. 1.

\*It is likely that many more farmers, will be sued for “patent infringement” by corporate giant Monsanto if the Saskatchewan Organic Growers are unsuccessful in their leave to appeal to the Supreme Court of Canada on behalf of Saskatchewan farmer Percy Schmeiser. On September 4<sup>th</sup> 2002, a Saskatchewan Appeals Court found Mr. Schmeiser guilty of having Monsanto’s patented Roundup Ready canola on his land, and not “ *advising Monsanto to come and remove it*” 2.

\* The public’s inherent right to know if they are eating GMO products and crops, continues to be denied as more and more GMO products come on line and only a small fraction are ‘voluntarily’ declared to have GMO ingredients. A federally created committee of over 128 members recently announced that it has reached agreement on draft standards for “*voluntary labelling of genetically modified foods.*” 3.

\* The Canadian Wheat Board will be unable to protect its markets for wheat in European countries, where GMOs are not wanted, if Canada allows the Monsanto request to market Roundup Ready Wheat here.

\* The World Trade Organization Panel, may rule in favour of a Canadian/ Argentinian/US request, to disallow a European Union prohibition on GM crops. The European Court of Justice ruled on September 8<sup>th</sup> /03, that although countries in the EU may “ *impose temporary bans on genetically modified foods for the purpose of examining associated health risks*” they must present “*detailed grounds*” for doing this and may not “*ban genetically modified foods just because they contain traces of biotechnology.*” 4

Such grave issues signal the need for an immediate pause in this headstrong, headlong rush into the ‘brave new world’ of GMOs, until all the important questions around their impacts on the diversity of our crops and plant life, healthy soils, and human health, are answered.

As evidenced here in Canada, this will be very difficult. For, despite concerns of the Canadian Wheat Board, organic farmers and the general public opinion, and warnings from eg. the Royal Society of Canada’s Panel on the Future of Food Biotechnology, the case for genetically modified crops and foods is pressed energetically by their manufacturers who have much to gain financially, and are in a rush to maximize their investments.

A key part of their strategy is to promote several themes/arguably myths, through magazine and newspaper ads, web sites, and arguments in various scientific journals etc.

Perhaps you have seen the following myths: ( countered by my referenced answers)

**Myth # 1** GMOs are perfectly safe, and those who dispute this are not using sound science, facts, or peer reviewed information. In fact those who don't support GMOs are using "unsubstantiated allegations and rhetoric." 5.

**Response:** According to E. Anne Clark, Plant Agriculture, Guelph University " *virtually all the peer reviewed evidence on either the human or environmental safety of GM crops corroborates the concerns raised by the opponents.*" 6

**Myth #2.** GMOs must be safe, as they are subjected to rigorous testing. and government regulatory requirements .

**Response:** The Royal Society of Canada Commission final report, stated that Canada " *failed to develop "rigorous" safety assessment requirements*" ... and recommended " *immediate initiation of research into the development of practical and scientifically robust approaches for the safety assessment of such foods.*" 7

**Myth #3** GM crops help reduce pesticide use.

**Response :** Farmers and regulators were assured that Bt corn would reduce dependence on synthetic pesticides that fight the European corn borer. However, no more than 1-2% of all insecticide applied to US corn , is actually used to control the corn borer, the rest is to control other blights such as root worm and soil pests. (Benbrook 1999) RR soybeans use more ( 9 million kg more per year), not less, herbicide active ingredients /ha than competing herbicides (Benbrook 2001) 8 And, " *emerging evidence suggests that the effectiveness of roundup in RR soybean systems is slipping as weed tolerance increases and grower are forced to increase rates, numbers of treatments , or use tank mixes with other products*". 9.

**Myth #4** GMOs help save \$\$ for farmers and increase profits.

**Response:** From the above answer to # 3, it is obvious that there are additional, not less costs for RR soybeans at least. Added to this, studies that show that much of the purported savings are because of " competition -driven reductions ie. price cutting by Monsanto and their competitors 10.

**Myth #5** We have been eating GMO produce and products for several years, so why fight it?

**Response:** It is true that the government has allowed GM corn, soy and canola to be grown here since the early 1990s, and over 7 out of 10 processed foods on our shelves now contain genetically modified ingredients. However, given the Royal Society concerns, as above, this appears to many to be an uncontrolled experiment, with Canadians and the environment as the guinea pigs. A growing number of people world-wide are fighting back.

**Myth #6.** The GMO industry are unabashed supporters of GMOs, but the Government is independent in its view.

**Response:** The Federal Government has designated Agriculture Canada as the lead agency for The Canadian Food Inspection Agency CFIA, rather than Health Canada or Environment Canada. Agriculture Canada's task is to promote agriculture and as a result, the Federal Government has funded

the following:

\* extensive advertisements in Canadian magazines such as Canadian Living and Coup de Pouce . 11. The Royal Society Panel noted in this regard that : “ *CFIA has engaged in active media campaigns promoting agricultural biotechnology. ..If the same government agency that is charged with the responsibility to protect the public health and environmental safety from risks ..also is charged with the promotion of the same technology..this represents .. a significant conflict of interest*” 12.

\* Industry Canada’s membership in (and funding to the tune of \$6 million since 1994) an industry lobby group BIOTECH Canada 13

The Federal Government has also:

\* authorized Monsanto and others to conduct field trials in over 50 “secret” locations in Canada 14

\* has yet refused to commit to refusing an application for the introduction of genetically modified wheat, and appears likely to approve its release. 15

\* joined with the USA and Argentina in demanding a World Trade Organization panel to rule on their opposition to a European Union ban on genetically modified crops 16.

**Myth #8** The public and MPS have had several forums in which to express their views

**Response:** When dealing with this issue, the Government Committee on Agriculture, heard only one anti- GMO presenter, and used its majority on the House of Commons to defeat MP Charles Caccia’s Private Members Bill C-287 ( which advocated labeling of GMO foods). The Government then set up a Standing Committee on Health to review the issue, but called a halt to its work, pending other “ more important tasks” 17 ( \*\* Having requested an appointment before the House Committee on Agriculture and Agrifood, as it discussed the issue of GMOs , and failing to hear back , NCWC sent its 2001 Brief on this issue to the Health Committee in March of 2002. No wonder we had no reply.)

**Myth #9** GM crops, such as Golden Rice, will help us feed a starving world.

**Response:** It is well known that politics and distribution are the determinants of who gets fed in poorer countries . Regardless, an eleven year old child (children are featured in magazine ads) would have to eat quite a quantity of golden rice ( 15 pounds a day), to get enough vitamin A to meet his dietary requirements 18.

**Myth #10** All farmers and farm groups in Canada are keen on GM crops.

**Response:** If this were so, the Saskatchewan Organic Growers would not be seeking to enter a Supreme Court case to fight for Percy Schmeiser, and the Canadian Wheat Board would not be opposing federal approval of GM round up ready wheat

**Myth # 11** Farmers have benefitted immensely from GMOs

**Response:** “ *As of January 2001, there is no publicly available survey or data on how individual farmers have benefitted from the adoption of GM crops in Canada. Therefore it is not possible to say how much economic benefit farmers have experienced from adopting this technology.*”<sup>19</sup>.

Not everyone is so supportive of GMOs. Increasing numbers of scientists, citizens, and countries, have contrary opinions and are taking a stand. Here are a few actions that have been taken:

\* Some European Union countries have imposed bans on GMOs, feeling they “*have the right to protect consumers’ health- a right that clearly prevails over the freedom-of-trade principle*”<sup>20</sup>.

\* In Britain in an unprecedented test of public opinion, resulting from 675 public meetings and 36,000 written comments to a (Government sponsored) survey of the public re GMOs , showed an overwhelming distrust of GMOs ( “*85% saying GM crops would benefit producers, not ordinary people, 86% saying they ere unhappy with the idea of eating GM food, 91% saying they thought GM had potential negative effects on the environment, and no fewer than 93 % of respondents saying that they thought GM technology was driven more by the pursuit of profit rather than public interest*”) <sup>21</sup>.

\* In response to the latest application for GM wheat The Council of Canadians has launched a flyer campaign-Send a slice of food to your MP–Keep our food GE Free. . October 2003.

\* In an August 2003 letter to the Prime Minister, the National Council of Women of Canada outlined its support for the “*Precautionary Principle*” that lies at the heart of the Cartagena Protocol on bio-diversity, and its concerns about bio-engineered foods. Under the Protocol, “*countries importing foods can demand that exporters give them prior notification about any genetically modified (GM) product. This allows the importing country to make a risk assessment of the safety of the product before approving the trade.*”

#### References:

1. Are we going to sacrifice a growing market for organic crops by risking contamination? e mail article. September 25, 2003. Michael Meacher, Agriculture Minister Great Britain Labour Party, 1997-2003.
2. Industry and Biotechnology:Teaching Students the Art of Doublespeak. E. Ann Clark. Guelph U. Presentation to the Canadian Association of University Teachers. November 2/02.
3. Committee agrees on standards for labelling genetically modified .The Canadian Press. St. Catharines Standard. September 10/03
4. UN Wire Service. United Nations Journal. September 10/03
5. Industry and Biotechnology:Teaching Students the Art of Doublespeak. E. Ann Clark. presented to the Canadian Association of University Teachers. November 2/02.(ref. Leiss01)
6. ibid. (ref. Domingo 2000, Wolfenbarger and Phifer 2000, Clark and Leihman 2001; federally appointed Royal Society Commission-Final report on the Future of Food and Biotechnology 2001.)
7. Royal Society of Canada Commission final report . Elements of Precaution: Recommendations for the Regulation of Food Biotechnology in Canada: RSC, 2001 (pg. 48)
8. The Rise and Fall of Agricultural Biotechnology. E. Ann Clark presented to the International Institute for Advanced Studies in systems Research, Baden Baden, Germany, August 2001.
9. A Citizen’s Guide to Biotechnology: Helping citizens have a real say in the development of biotechnology in Canada .Canadian Institute of Environmental Law and Policy. 2002

10. **The Rise and Fall of Agricultural Biotechnology. E. Ann Clark. (as per 8)**
11. **Abbey M.2000. Magazine leaves a bad taste: Ottawa pushes safety of bio-engineered food. Montreal Gazette 28 March 2000, pg.A1.**
12. **(Royal Society of Canada).Final Report of the Panel on the Future of Food and Biotechnology 2001. page 212.**
- 13 **Government paying to lobby itself: Industry Canada is a member - and a client- of group organized to influence biotech policy. Ottawa Citizen.12 April 2000.**
- 14 **Council of Canadians. campaign flyer. Send a slice of bread to your MP-keep our bread GE free. October 2003 .**
- 15 **ibid**
16. **UN wire : US, Canada, Argentina Demand WTO Panel for EU Biotech Curbs. August 19, 2003.**
17. **personal communication E. Ann Clark 08/03.**
18. **“Staying Human in an Engineered Age” by Bill McGibbon, Henry Holt and Company)**
19. **Furtan, H. and Holtzman, J. 2001. Agronomic Benefits and Costs of GMO Crops: what do we know? In : Richard Gray et al: Taking Stock: The Benefits and Costs of Genetically Modified Crops, p. 51**
20. **UN Wire EU Countries May Ban GMOs With Proof of Risks, Court Says. 09/08 8,03**
21. **GM Crops? No Thanks -Britain delivers overwhelming verdict after unprecedented public opinion exercise. Michael McArthy, Minister of Agriculture Britain 1997-2003**

**SOME GOOD REFERENCE POINTS:**

E. Ann Clark, Guelph University: [www.plant.uoguelph.ca/research/homepages/](http://www.plant.uoguelph.ca/research/homepages/)

Council of Canadians [www.canadians.org](http://www.canadians.org) phone @ 1800367 7177

Citizens Guide to Biotechnology- Canadian Institute for Law and Policy [www.cielap.org](http://www.cielap.org)

National Council of Women Policies [www.ncwc.ca](http://www.ncwc.ca) - Genetic Engineering & Research/00 Genetic Engineering, Public Awareness and Trade/00, The Precautionary Principle /02