Labelling of GMO Products: Strategic Trade Policy Considerations for Canada

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Labelling of Genetically Modified Products:
Strategic Trade Policy Considerations for Canada

EXECUTIVE SUMMARY

Introduction

Although the meaning of the term "genetically modified" varies across jurisdictions, the most common reference is to products that are the result of recombinant DNA or rDNA technology. While scientists in both exporting and importing countries have generally found products that contain genetically modified organisms (GMOs) to be safe for human and animal consumption, some consumer and environmental groups, particularly in the European Union (EU), are pressuring their governments for more exacting regulatory procedures and mandatory labelling for GMOs and GM products. Such demands have already disrupted trade in corn products and look to do so in other areas. Canada, one of the world's largest producers of canola, for example, no longer exports this product to the EU because half of the Canadian canola crop is genetically modified (GM) product.

Mandatory labelling of food products, of course, has long been required in most OECD countries. Such labelling, however, has generally focused on the *content of the products* in as far as they concern ingredients, nutrition, and health and safety considerations. More recently, there are calls for special labelling of food products to indicate *how they are produced*. Activist groups insist that governments should require labelling to inform consumers that specific food products contain (or may contain) GMOs so that they can make better or more informed choices. On the other hand, producers and industry groups, and many government officials and other commentators argue that such labels add no useful knowledge and would disrupt markets by creating undesirable barriers to trade.

In the context of the multilateral trade rules, mandatory labels are those that are required by regulations and must be met in order to sell a product in a specific market. In essence, a mandatory labelling scheme will be designed and administered by a government, or a third party sanctioned by the government. Mandatory standards or regulations are subject to scrutiny under the rules of the World Trade Organization (WTO). On the other hand, "voluntary" labels are those that are usually developed by industry through a collaborative process and may be used in the domestic market but there is no requirement to do so. Voluntary labels or standards are not automatically subject to WTO disciplines. While meeting mandatory technical regulations is a legal prerequisite to market access, complying with voluntary standards is not. Nonetheless, failure to comply with a voluntary standard may effectively exclude a product from a market or significantly reduce the product supplier's ability to contest a market if buyers insist, as a commercial matter, that the standard be met.

Overview of the GMO Labelling Issue Internationally

Discussions on labelling of GMOs are taking place in various forums, particularly the OECD and the Codex Alimentarius Commission, and in several national jurisdictions. Three approaches can be identified that governments seem to be following to varying degrees at the national level. The first and most prevalent strategy is to wait and see, doing only what is necessary to maintain public confidence until the Codex Alimentarius Committee on Food Labelling (CCFL) completes its current consultative process and produces a negotiated set of international labelling standards for adoption by member states. The second

approach is typified by the actions of the European Union, Australia, and New Zealand, which have independently initiated domestic mandatory labelling measures, while at the same time continuing to participate in the CCFL consultative process. The third and least desirable approach to GMOs is one of piecemeal reactions, wherein the response to perceived public alarm includes the drafting of legislative instruments that represent the narrow views of a particular government department or public group, rather than the formulation of a holistic and coherent governmental policy. This was the case in Japan where labelling regulations drafted by the Ministry of Agriculture, Forests and Fisheries (and set to be enacted in April, 2001) were blocked by the Ministry of Health, which believes the legislation was drafted without sufficient research into the health-related aspects of GMOs. This approach not only creates a lack of public confidence in government action but also causes uncertainty among trading partners.

The Canadian Practice re Labelling of Foods

In Canada, genetically modified foods are not treated any differently from conventional products. They are regulated as novel foods and scrutinized for health and safety risks. The Canadian policy position for the past several years has been that it is not advisable to label production processes but only products themselves. This has been the official stance even though there may be misgivings in some departments. It is still the best strategy because once process and production methods (PPMs) are introduced wholesale into the labelling regime it will be virtually impossible to establish workable disciplines.

Canada maintains a rigorous process for the testing and approval of novel foods that is carefully managed by Health Canada, the Canadian Food Inspection Agency (CFIA) and Agriculture and Agri-food Canada. Regulatory agencies in Canada focus on the novel features of a product, regardless of method of origin. As a result, a product can be regulated as a novel food or a plant (organism) with novel traits if it contains some trait that is not previously found in its classical counterpart or species, even if this was developed using traditional breeding methods.

The CFIA is considering the voluntary approach to labelling of GM products, consistent with its labelling policy for food. Since, in its view, GMOs do not constitute a health or safety issue, mandatory labelling is not considered necessary. It is participating with numerous stakeholders in the voluntary process to develop such a labelling standard. This is coordinated by the Canadian General Standards Board (CGSB) and spearheaded by the Canadian Council of Grocery Distributors (CCGD). The Committee is responsible for the development and maintenance of a National Standard of Canada for the Voluntary Labelling of Foods to distinguish whether or not foods were obtained through genetic modification. Furthermore, an Expert Panel on the Future of Food Technology was formed under the Royal Society of Canada in February 2000 which will forecast the types of food products being developed through biotechnology, the science to be used in their development and assessment, and any potential risks to human or animal health and the environment. The Panel will also identify the scientific capacity needed to ensure the safety of new foods and suggest new policies, guidelines, and regulations necessary to protect human and animal life and the environment. These two initiatives should ensure that there is a thorough consideration of all the issues regarding the public interest in terms of GMOs and GM foods.

The Rationale for GMO Labels

It is significant that none of the mandatory or voluntary labelling schemes that have been proposed have been on the basis of risk to health. Consumer groups argue that a mandatory label for GM products reflects consumers' right to information in order to support informed choice. The right-to-know is a noble

principle but is not without problems of its own, including matters related to truth and liability. A secondary argument for mandatory labelling is the precautionary principle which suggests that in the lack of scientific certainty, if there is potential threat of harm to humans, animals, plants or the environment, governments should be cautious in their regulatory approach. Citing the lack of knowledge about the long term impact of GMOs in the environment, groups that want to restrict international trade in GM products refer to the precautionary principle enshrined in the Biosafety Protocol and demand that this be extended to the trading system for all products containing GM ingredients. Also, Article 18 of the Protocol requires that living modified organisms (LMOs) for release into the environment be accompanied by documentation that identifies them as LMOs. Some environmentalists have taken this to mean that all GM products should be labelled as such.

Critics point out that full application of the precautionary principle could require those opposed to a regulation to prove a negative, i.e., that there is no risk, a task that cannot be satisfied, rather than the more traditional burden under the multilateral trade rules of proving that the benefits outweigh the possible risks. Reliance on the precautionary principle would introduce a new level of uncertainty in international trade. In WTO jurisprudence, the trade rules appear to take precedence over the precautionary principle.

Practical Labelling Issues

The first conundrum posed by labelling of GM products is the meaning that will be ascribed to GMOs for the purpose of a label. The second is what will be the definition of “GMO free" or "contains GMO.” Other challenges include:

- Will the program be voluntary or mandatory?
- What standard or threshold will be used to define GMO content?
- How will products be tested to decide on their GMO content?
- How will companies be required to verify GM status?
- Will GM testing or labelling include all ingredients or only some ingredients? If the latter, what percentage of GM content will trigger testing or labelling requirements?
- How will products made from animals that are fed GM feed be labelled?

Voluntary labelling programs may be more efficient when a small segment of the population is interested in the GM status of food products and is willing to pay more for products carrying this information. But if the majority of the public wants to know, then mandatory programs may be more effective. On the cost side, the supply chain requirements for segregating products will be the main determinant of costs.

While labelling *per se* would not directly restrict trade, the indirect effect of the regulatory requirement for labelling can be scrutinized if it creates an onerous burden on exporters. A “GMO free” label would be the most problematic because it would require that GM and non-GM products be segregated throughout the production, storage, and distribution chain. This can add significant cost to the final product and make it prohibitive for exporters to contest a market because it would require the establishment of two or more parallel storage, transport, and processing systems. This would be extremely burdensome for suppliers and difficult to justify, given the questions raised earlier with respect to the objectives of the labelling regulations.

"GMO Free"

Another issue is whether the label is meaningful. If a product is labelled "GMO free" how does one prove the assertion? A "GMO free" label would also have to address if, when, or how often tests would be required to determine if protein or DNA from genetic modification is present. It will be very difficult to enforce such a regulation. There is no single test to determine whether protein and DNA from genetic modification appears in a product and the tests vary in sensitivity, accuracy and cost. Although a standard test may be developed, deciding on such a test can be quite discriminatory since some countries might not have the equipment or facilities to test thousands of products on a regular basis in a cost effective manner. Considering that at this point in time, the vast majority of fresh produce and foodstuffs products do not contain GM ingredients, it would be a logistical nightmare to label all of them. However, it is also evident that ingredients (lecithin) from GM soya bean are widely used in the processed foods industry all over the world and this is very difficult to trace.

"Contains GMOs"

If consumers prefer to be assured (for whatever reasons) that the food they are eating does not contain products of genetic modification, the "may contain" or "contains GMO" option would be preferable, but inadequate. This option would notify consumers of any possibility that the products might have been the result of genetic modification, without requiring that all products be tested. Consumers would be able to choose the products that do not contain GMOs. But if regulations require that GM products be labelled, manufacturers may prefer a vague label such as "may contain GMOs" because they can avoid liability claims and do not have to perform expensive testing and quality control. However, the accuracy of such labels is always questionable and the labels may not be meaningful. Most countries have recognized the need to decide on the threshold level of GMOs that is permissible: What percentage? Should it apply to every ingredient or just the product itself? These are very contentious issues. There are no studies on the market impact of positive labels for GM products but there seems to be a general view in several countries that if there are GMOs in food products, people must have access to that information on the product itself.

Some critics point out that positive labels can be almost as misleading as no label at all. In theory, a positive label indicating GMO content may imply risk and lead consumers to consider health consequences of consuming GM products. While a positive mandatory label ("contains GMO") will tend to discriminate among like products in terms of the international trade rules, it can also serve a useful purpose to provide information to consumers in the same way that other labels on organic or irradiated foods do.

GATT/WTO Rules Relevant to the Labelling of GM Products

If Canada were to introduce a mandatory labelling requirement for GM products, it could be challenged under the basic rules of the General Agreement on Tariffs and Trade (GATT) and/or specific rules of the Agreements on Technical Barriers to Trade (TBT) and on Sanitary and Phytosanitary Measures (SPS) under the World Trade Organization. There is no provision in the international trade rules for a "right-to-know-principle" about how a product is produced. This is not a justiciable concept under the GATT/WTO rules and it is unclear how it would be treated by a dispute settlement panel. Furthermore, the multilateral trade rules specifically apply to end products themselves rather than differences in their method of production.

The GATT prohibits arbitrary restrictions on trade and requires that the products of all Members be treated in the same manner as like products of domestic origin (Article III). The aim of the SPS Agreement is to prevent domestic SPS measures from having unnecessary negative effects on international trade and to guard against their use for protectionist purposes. SPS measures must only be applied in demonstrable instances of risk to human, animal or plant life or health, and must be based on scientific principles and on risk assessment. The TBT Agreement is designed to ensure that technical regulations are not used as disguised barriers to trade and that legitimate standards restrict trade as little as possible. Technical regulations are allowed to restrict trade in limited instances such as national security requirements; the prevention of deceptive practices; protection of human health or safety, animal or plant life or health, or the environment, among others. However, in justifying trade restrictive regulations governments must assess the risks, taking account of available scientific and technical information, and the end-uses of products, among others. Any mandatory labelling requirement for GMOs or GM foods that is challenged in the WTO will have to meet certain legal tests.

"Like product"

Firstly, a mandatory labelling requirement might be considered to discriminate between "like products" — i.e., that a GM product and non-GM product are the same in terms of product characteristics. (For instance, oil from GM soybean and non-GM soybean is identical, even in molecular structure). In brief, the factors that are now generally considered in the evaluation of likeness of products by WTO dispute settlement Panels are the product's properties, nature and quality, its end use, consumer tastes and habits and its tariff classification. By this reasoning, and considering that end-uses in a given market and consumers' tastes and habits may differ, a GM product and a non-GM product will be "like" products, i.e., not distinguishable from each other. As a result, it could be argued that mandatory labelling discriminates against the imported GM product and are inconsistent with the GATT rules prohibiting discrimination between like products.

"Necessity" test

Another basis for challenging a mandatory labelling regulation could be that it is not a "necessary" barrier to trade. This presents a more complicated argument and it is less clear how a WTO Panel might rule on this issue. To a large extent, it depends on the level of scientific certainty or uncertainty about the risks posed by GM products. As is now normal procedure, the WTO Panel would rely on experts in the field to inform it about the safety issues relating to GM products. In addition, as in the *Beef Hormones* case, a risk assessment based on scientific evidence may be required before a government is allowed to take a decision to restrict trade in or require labelling of GM products. It is also important to remember that Canadian regulatory agencies do not perceive any risk to human, animal or plant life or health arising from GMOs.

"Least trade restrictive"

A third GATT/WTO requirement is that measures must be the "least trade restrictive" available. A WTO dispute settlement Panel might need to consider whether a mandatory labelling requirement for GM products is the least trade restrictive policy intervention that a government could take to address even legitimate concerns about GM products, given the level of scientific uncertainty at this moment. This might be the weakest argument to oppose labelling because in many respects labelling could be considered a much softer action compared to a total ban on GM products, or quotas on the number of GM products, or

controls on imports of selected types of GM products. Nevertheless, even if a mandatory labelling requirement was judged to be the least trade restrictive measure, it would have to be justified under a GATT exception; even Article 2.2 of the TBT Agreement also stipulates this.

"Necessary to protect human, animal or plant life or health"

Fourthly, while in theory it may be argued that GATT Article XX (b) provides for an exception to the trade disciplines for measures addressing human, animal or plant life or health concerns, closer scrutiny indicates that it would not apply to mandatory labelling of GM products. The reason is simple. No labelling scheme is couched in terms of health or safety considerations. Rather, mandatory labelling is based on consumers' right to information about the products they purchase. Indeed, the most compelling factor in labelling of GM products is identification, not health protection. This will automatically disqualify a mandatory labelling regime from the shield of Article XX (b) because it has traditionally been very strictly interpreted.

To date, there exists no broadly accepted scientific evidence of risk to human, animal or plant life or health arising from GMOs. This is also probably the biggest barrier to a WTO Member's relying on the SPS Agreement in restricting trade in GMOs. Likewise, the obligation to base all SPS measures on an objective risk assessment would be the first obligation relied upon by a WTO Member complaining of a measure alleged not to be in compliance with the SPS Agreement. Similar disciplines restrict the potential for justifying mandatory labelling under the TBT Agreement.

It is safe to conclude that a mandatory labelling scheme for GM products is unlikely to satisfy the requirements of GATT Article III and perhaps the SPS and TBT Agreements as well. It would not fall under Article XX exceptions either. The GATT/WTO consistent option would be a voluntary label, whether positive or negative. Furthermore, previous GATT and WTO Panels (*Tuna/Dolphin* and *Beef Hormones*) have recognized the legitimate utility of voluntary labels. It is unlikely that any government would challenge a voluntary labelling scheme since it is not a pre-condition for market access.

Conclusions and Recommendations

It is advisable that the Canadian government defer any consideration of a mandatory labelling scheme for GM products. Although it is clear that many Canadians think that they have the right to know whether products contain GMOs, there does not seem to be a compelling desire among the Canadian public for mandatory labelling of all GM products, even in the face of a clearly articulated view regarding opposition to GMOs by some activist groups. The prudent course would be to remain on the current policy path. In light of the discussion above it would be useful to consider the following options:

1. Considering Canada's heavy reliance on international trade for economic growth, it is not in Canada's best interests to have several different labelling regimes in overseas markets. Furthermore, a domestic voluntary standard that is different from other countries will still be a market impediment. Canada should continue to work in international forums, particularly the Codex Committee on Food Labelling, to develop an international voluntary standard for labelling of GM foods. The federal government should continue to work in multilateral forums to ensure that:
    a. trade in biotechnology is transparent and fair, to allow all countries access to both the latest technology and markets; and
    b. all national governments retain the right to introduce measures to address any threats that biotechnology may pose to human, plant or animal life.

2. Canada should resurrect the proposal to establish a Working Party on Biotechnology in the WTO in order to address the critical trade-related aspects of GMOs. A group of this nature could examine the various issues and work towards building multilateral consensus on the treatment of GM products in international trade.

3. Canadians must ensure that any labelling regime for GMOs that emerges from the national voluntary process is practical and credible. If it is too complicated or difficult to implement it will lead to confusion in the marketplace.

4. There may be a need to monitor international approaches to the role of non-science in regulating the products of biotechnology. It is unlikely that the WTO regime will accommodate the "right to know" how goods are produced in the immediate or distant future. In the meantime, a voluntary approach to labelling of GM products should address the concerns of Canadians who want to know which products are genetically modified or have GM ingredients for religious, ethical or other reasons.

5. The trend towards mandatory labelling schemes that started with the European Union suggests the need for paying closer attention to the actions of other governments on this issue, as Canada's market access in these nations could be hampered. It might be advisable to create an inventory of national and international regulatory responses to the labelling of GMOs, including an overview of the probable effect of these measures on Canada's trade with these nations.

6. In the meantime, the Canadian regulatory authorities (CFIA, Health Canada, and Agriculture Canada) should continue to test and evaluate GMOs rigorously to ensure their safety for human and animal consumption. This will protect the health of the Canadian public and at the same time facilitate international trade. A possibly useful compromise approach that would meet public demands is to require mandatory labelling of GM foods in two instances:
    a. when significant nutritional or compositional changes have been made in comparison to foods already in the marketplace; and
    b. in instances where consumers need to be alerted to a potential health or safety risk to certain segments of the population.

This is the current practice for all foods, but if the genetic manipulation of foods creates detectable new risks to specific consumers, then special labelling will be appropriate.

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Introduction

The recent introduction of consumer agricultural products produced through biotechnology has given rise to new trade disputes. While scientists in both exporting and importing countries have generally found products that contain genetically modified organisms (GMOs) to be safe for human and animal consumption, some consumer and environmental groups, particularly in the European Union (EU), are pressuring their governments for more exacting regulatory procedures and mandatory labelling for GMOs.[1] Such demands have already disrupted trade in corn products and look to do so in other areas.[2] Canada, one of the world's largest producers of canola, for example, no longer exports this product to the EU because half of the Canadian canola crop is genetically modified (GM) product.

Trade disputes raised by these concerns could test the adequacy of the science-based framework of the Agreements on Sanitary and Phytosanitary Measures (SPS) and on Technical Barriers to Trade (TBT) of the World Trade Organization (WTO) to resolve biotechnology-related trade issues. In September 2000, Thailand formally requested consultations with Egypt, under the dispute settlement procedures of the WTO, regarding the Egyptian prohibition on importation of canned tuna with soybean oil from Thailand.[3] The Egyptian ban was apparently triggered by concerns that the oil is made from genetically modified soya beans.

Mandatory labelling of food products, of course, has long been required in most OECD countries. Such labelling, however, has generally focused on the *content of the products*. More recently, concerns about food safety in Europe and other OECD countries, and negative public reaction to new biotechnologies, have resulted in calls for special labelling of food products to indicate *how they are produced*. In particular, there is a very contentious debate about food products that may contain GMOs. Activist groups insist that governments should require labelling to inform consumers that specific food products contain (or

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1 Although the meaning of the term "genetically modified" varies across jurisdictions, the most common reference is to products that are the result of recombinant DNA or rDNA technology. The EU defines a GMO more broadly as "any organism in which genetic material has been altered in a way that does not occur naturally by mating and/or natural recombination."

2 It is not clear what will be the market impact of either mandatory or voluntary labelling of GM products. However, consumer resistance and fears about GM products have already significantly disrupted the market for some crops. For instance, US exports of soya beans to the EU plummeted from 11 million tons in 1998 to 6 million tons in 1999 while American corn shipments to the EU fell from 2 million tons in 1998 to 137,000 tons in 1999. This represented a combined loss of almost 1 billion dollars in sales for US agriculture. See Brian Helweil, "Portrait of an Industry in Trouble," in *Worldwatch News Brief*, February 17, 2000. (www.worldwatch.org/alerts/00217.html).

3 "Egypt - Import prohibition on canned tuna with soybean oil. Request for consultations by Thailand." 27 September, 2000. (WT/DS205/1; G/L/392; G/SPS/GEN/203).

may contain) GMOs so that they can make better or more informed choices. On the other hand, producers and industry groups, and many government officials and other commentators argue that such labels add no useful knowledge and would disrupt markets by creating undesirable barriers to trade.

This paper addresses the trade policy issues raised by the growing concerns expressed about the safety of GMOs in food products. It will not discuss the merits or demerits of GMOs or genetically modified (GM) products *per se*. Rather, it will focus specifically on the implications of demands for labelling. It will consider Canada's options in addressing the labelling issue in terms of public interest concerns, trade policy obligations, and market impacts. It will first address the rationale for labels and explore the current policies in Canada. It will also consider the relevance of the precautionary principle, process and production methods (PPMs), and the Biosafety Protocol to the GMO labelling issue. It will then examine Canada's commitments under international trade rules (under the WTO and the NAFTA) and explore the ramifications of labelling of GMOs (positive and negative labels) in terms of Canada's treaty commitments, and other considerations. Finally, the paper will provide strategic advice on options to be pursued to address the GMO labelling issue within the context of consumer concerns, treaty commitments, and market access considerations. The emphasis will be mainly on the interface between labelling of GMOs and the international trade rules.

Overview of the GMO Labelling Issue Internationally

Although public and media reaction to the introduction of GM foods has been increasingly critical of government regulatory agencies, especially regarding labelling, no coherent, globally accepted response to the issue has emerged as yet. Discussions on labelling of GMOs are on-going in various forums, particularly the OECD and the Codex Alimentarius Commission, and in several national jurisdictions. Three approaches can be identified that governments seem to be following to varying degrees. (See Annex I for an overview of initiatives in various countries.)

The first and most prevalent strategy is to wait and see, doing only what is necessary to maintain public confidence until the Codex Alimentarius Committee on Food Labelling (CCFL) completes its current consultative process and produces a negotiated set of international labelling standards for adoption by member states.[4] Canada and other exporters of GM foodstuffs support this approach, but may pay a domestic political price for doing so. In Canada, debate on GMOs in Parliament was a very contentious issue and some Parties expressed a strong preference to restrict GM products. In the United States, bills have been tabled in the Senate and the House of Representatives calling for mandatory positive labelling of all GM products, although this is contrary to current US federal government policy. While it is unlikely the proposed legislation will ever be passed, such proposals point to the difficulty inherent in following a "wait-and-see" approach, in that it may cede the field to opponents of foods produced through biotechnology, or alternatively, to the producers of GM crops and foods. It is possible that the US government's stance on this issue is informed by the strong likelihood that multilateral regulations will be less stringent than those sought by its most vocal domestic opponents.

The second approach is typified by the actions of the European Union, Australia, and New Zealand, which have independently initiated domestic mandatory labelling measures, while at the same time continuing to

[4] See Codex Alimentarius Commission, "Proposed Draft Recommendations for the Labelling of Foods Obtained through Biotechnology," ALINORM 99/22.

participate in the CCFL consultative process. The tendency by these countries toward unilateral action can be seen to have arisen in response to earlier contentious issues (nuclear power and armaments, for example) and is, in part, a by-product of the large role played by environmental and health-related NGOs in their domestic political culture. It remains to be seen to what degree these domestic regulations will coincide with the standards that will eventually emerge from the CCFL process.

In 1997, European Union regulations[5] established mandatory labelling when a product consists of or contains genetically modified organisms. The presence of DNA or protein resulting from genetic modification is the basis for triggering labelling of food. For products consisting of a mixture of GMOs and organisms not genetically modified, the possible presence of GMOs must be indicated. Revisions to the regulations,[6] which came into force in April 2000, extended labelling requirements to include GM additives and flavourings used in food. Only a one percent *de minimis* threshold level (of each ingredient) for GM material in food ingredients derived from non-GM sources will be allowed. In January 2000, the European Commission (EC) also presented a proposal for a directive that will include a requirement for animal feeds to be labelled.[7] But this is not yet in effect. The main motivation for mandatory labelling of GM foods or products in the EU is to provide the maximum information to consumers on a scientifically verifiable basis. It is in response to significant opposition to GMOs in Europe and significant public pressure for labelling. The EU explains that consumers want to be able to make an informed decision regarding whether or not to purchase GM products.

The Australia-New Zealand Food Standards Council (Ministers of Health) agreed in October 1999 to implement a strict mandatory labelling system (under Standard A18)[8] for genetically modified foods and products containing GMO ingredients. Manufacturers and producers would be responsible for reporting accurate levels of GM content. Australia New Zealand Food Authority (ANZFA) officials indicate that the motivation behind mandatory labelling of GMOs in Australia and New Zealand is apparently two-fold: [9]

1. A response to strong public pressure for all GM foods to be labelled, based mainly on the wish of many consumers to be able to make an informed choice about whether to buy foods containing GM material.

2. To abide by obligations under the WTO, specifically in regard to SPS and TBT rules— they do not want "to impose unwarranted restraints on trade, or unjustified costs on industry."

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5 Regulation EC No 258/97; Directive 97/35/EC; and Directive 90/220/EEC

6 Commission Regulation (EC) No 50/2000, 10 January 2000, OJ L 006, 11 January 2000, pp. 15-17, and Commission Regulation (EC) No 49/2000 of 10 January 2000, OJ L 006, 11 January 2000, pp. 13-14.

7 Commission of the European Communities, Proposal for a European Parliament and Council Directive amending Directive 79/373/EEC on the marketing of compound feeding stuffs, COM(1999) 744 final, 2000/0015, 7 January, 2000.

8 ANZFA, Amendment No. 40 to the *Foods Standards Code*, 'Standard A18—Food Produced Using Gene Technology.' *Commonwealth Gazette*, No. P20, 13 August 1998.

9 "Regulating Genetically Modified Food." Speech Prepared for the APEC Technomart III Conference; Queensland, Wednesday 3 November, 1999. (For delivery by Mr Ian Lindenmayer, Managing Director, Australia New Zealand Food Authority). http://www.anzfa.gov.au/documents/sp008_99.asp.

Interestingly, ANZFA[10] officials see mandatory labelling as a means of keeping within WTO commitments since they consider labelling less trade restrictive than a ban on GM foods or products. Nevertheless, the Australian Department of Foreign Affairs and Trade had argued against mandatory labelling on the grounds that such a requirement would be considered an indirect trade barrier and would be inconsistent with Australia's WTO obligations. The earlier version (1998) of Standard A18, only required labelling of food when genetic engineering has changed the food to such an extent that it can no longer be considered as "substantially equivalent" to its conventional counterpart. But the labelling requirement was changed in October 1999 to include all foods produced with gene technology and to require clear labelling of genetically modified food ingredients.[11]

It is expected that the ANZFA labelling regulations will come into effect in September 2001. The EC is hoping that the revised Directive will be adopted by autumn 2000 with transposition into national law by spring 2002.

The third and least desirable approach to GMOs is one of piecemeal reactions, wherein the response to perceived public alarm includes the drafting of legislative instruments that represent the narrow views of a particular government department or public group, rather than the formulation of a holistic and coherent governmental policy. This can be seen most clearly in Japan where labelling regulations were drafted by the Ministry of Agriculture, Forests and Fisheries and are set to be enacted in April, 2001. These regulations were blocked by the Ministry of Health, which believes the legislation was drafted without sufficient research into the health-related aspects of GMOs and, as such, does not adequately respond to its concerns. This approach not only creates a lack of public confidence in government action but also causes uncertainty among trading partners.

Apart from those identified above, there are a number of other issues surrounding international standards for the labelling of GMOs that have yet to be addressed. These include issues of definition and compliance, among others. For example, should the products of a non-GM animal that has consumed GM feed be considered genetically modified? How are threshold levels to be monitored and by whom, government or industry? Different governments hold conflicting opinions on these and other questions, opinions that may persist and be enshrined in law even after the CCFL discussions on this issue have been completed.

The Canadian Practice re Labelling of Foods

In Canada, genetically modified foods are not treated any differently from conventional products. The Canadian policy position for the past several years has been that it is not advisable to label production

[10] ANZFA is a statutory authority that develops and reviews food standards to regulate food in both countries. It is a partnership between ten governments (Australia's Federal, State and Territory governments, and the New Zealand Government). ANZFA does not enforce food laws. Enforcement of food laws is done in Australia by State, Territory and local governments, and in New Zealand by the Ministry of Health.

[11] See Clare McNamara, "Food and the Future: Labelling of foods produced using gene technology." *Alternative Law Journal*, 24:6, December 1999, pp. 294-300. McNamara also argues that labelling of GM foods is a proportionate way to achieve a consumer protection objective and would not constitute an unnecessary barrier to trade under the TBT Agreement.

processes but only products themselves.[12] This has been the official stance even though there may be misgivings in some departments. It is still the best strategy because once process and production methods (PPMs) are introduced wholesale into the labelling regime it will be virtually impossible to establish workable disciplines. (See the section on PPMs below).

Under the Food and Drugs Act (FDA), Health Canada is responsible for the administration of health and safety standards and the development of food labelling policies related to health and nutrition. The Canadian Food Inspection Agency is responsible for the administration of food labelling policies related to misrepresentation and fraud regarding food labelling, packaging and advertising (FDA), and the general agri-food and fish labelling provisions respecting grade, quality and composition.[13] In addition, since 1999, CFIA assumed responsibility for the administration of the food related provisions of the Consumer Packaging and Labelling Act (CPLA), including basic food label information, net quantity, metrication and bilingual labelling.[14]

Canada maintains a rigorous process for the testing and approval of novel foods[15] that is carefully managed by Health Canada, the Canadian Food Inspection Agency (CFIA) and Agriculture and Agri-food Canada. [16] While the United States uses a product-based, not process-based definition for GMOs, Canada takes it further and regulatory agencies focus on the novel features of a product, regardless of method of origin. As a result, a product can be regulated as a novel food or a plant (organism) with novel traits if it contains some trait that is not previously found in its classical counterpart or species, even if this was developed using traditional breeding methods.[17]

The CFIA is considering the voluntary approach to labelling of GM products, consistent with its labelling policy for food. Since, in its view, GMOs do not constitute a health or safety issue, mandatory labelling is not considered necessary. The CFIA is hoping to get a Canadian labelling standard that provides

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[12] An exception to this practice is the mandatory labelling requirement for irradiated foods. Under the Food and Drugs Act, prepackaged food products that have been irradiated must carry a special symbol and a label to indicate such. (Food and Drugs Act, Part B, Food, Division 1 – B.01.035, October 6, 1994). However, irradiation is only allowed for potatoes, onion, wheat, flour, whole wheat flour, spices and some seasonings.

[13] The relevant laws are: Canada Agricultural Products Act (CAPA); Meat Inspection Act (MIA); and Fish Inspection Act (FIA).

[14] This was transferred to CFIA from Industry Canada in 1999.

[15] Under the Regulations Amending the Food and Drug Regulation (948- Novel Foods, SOR/99-392, 6 October, 1999) the definition of "novel foods" includes: c) a food that is derived from a plant, animal or microorganism that has been genetically modified such that:
i. the plant, animal or microorganism exhibits characteristics that were not previously observed in that plant, animal or microorganism;
ii. the plant, animal or microorganism no longer exhibits characteristics that were previously observed in that plant, animal or microorganism; or
iii. one or more characteristics of the plant, animal or microorganism no longer fall within the anticipated range for that plant, animal or microorganism.

[16] See Health Canada, "Guidelines for the Safety Assessment of Novel Foods." http://www.hc-sc.gc.ca/food-aliment/english/subjects/novel_foods_and_ingredient/novel_foods_and_ingredient.html.

[17] It is also important to remember that Health Canada developed guidelines for novel foods as early as 1994. While no specific regulation exists for assessing the environmental impact of novel food products, under the Seeds Act [Clause 4(1)(b)], the CFIA carries out environmental assessments of plants with novel traits before authorizing their release into the environment. See Forge (1999).

information that is meaningful and accurate. It is participating with numerous stakeholders in the voluntary process to develop such a labelling standard. This is coordinated by the Canadian General Standards Board (CGSB) and spearheaded by the Canadian Council of Grocery Distributors (CCGD).[18] The Committee is responsible for the development and maintenance of a National Standard of Canada for the Voluntary Labelling of Foods to distinguish whether or not foods were obtained through genetic modification.

Furthermore, in order to address the concerns of Canadians regarding the safety of foods derived from biotechnology in general, an Expert Panel on the Future of Food Technology was formed under the Royal Society of Canada in February 2000. The terms of reference of the Panel are to forecast the types of food products being developed through biotechnology, the science to be used in their development and assessment, and any potential risks to human or animal health and the environment. The Panel will also identify the scientific capacity needed to ensure the safety of new foods and suggest new policies, guidelines, and regulations necessary to protect human and animal life and the environment.[19]

The two initiatives mentioned above should ensure that there is a thorough consideration of all the issues regarding the public interest in terms of GMOs and GM foods.

Distinction between "Voluntary" and "Mandatory" Labelling

In the context of the GATT/WTO system, mandatory labels are those that are required by regulations and must be met in order to sell a product in a specific market. In essence, a mandatory labelling scheme will be designed and administered by a government, or a third party sanctioned by the government. Mandatory standards or regulations are subject to WTO scrutiny. On the other hand, "voluntary" labels are those that are usually developed by industry through a collaborative process and may be used in the domestic market but there is no requirement to do so. They are, therefore, voluntary. Voluntary labels or standards are not automatically subject to WTO disciplines.

All countries set at least some mandatory technical product standards specifying some property, quality, dimension, or other characteristic that must be met by imported products to protect the health and safety of their populations or their domestic environment, or to prevent deceptive practices. Technical standards may impede market access if they are developed in a way that makes it difficult for foreign suppliers to participate in the standard-setting process, or to get information about the standard or about compliance testing, or to comply with unusual local product characteristics. Thus, the goal of the WTO Agreement on Technical Barriers to Trade (TBT) is to ensure that these circumstances do not arise, i.e., that technical

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[18] The committee's somewhat awkward title reflects its broad mandate: the development and maintenance of a National Standard of Canada for the Voluntary Labelling of Foods to distinguish whether or not foods were obtained through genetic modification. The standard, C**/CGSB-32.315, will include, but is not limited to:

- The development of general principles and models for voluntary declarations that are understandable, informative, verifiable, and not false or misleading for use as claims in food labelling and advertising;
- Procedures required to verify the truthfulness of these declarations (or equivalent declarations) as claims in food labelling and advertising from production to final point of sale;
- Principles of a certification mechanism, where applicable;
- Definitions that are clear and concise.

[19] For the terms of reference and members of the Panel see: www.rsc.ca/foodbiotechnology/indexEN.html.

standards are not used as disguised barriers to trade and that legitimate standards restrict trade as little as possible.

The TBT Agreement distinguishes between mandatory technical regulations and voluntary standards. *Technical regulations* set out mandatory product characteristics or their related processes and production methods (PPMs). They may also deal with terminology, symbols, packaging, marking, or labelling requirements set by central governments, local governments, or non-governmental bodies. *Standards*, set by "recognized" bodies, provide for common and repeated use, rules, guidelines, or characteristics for products or related processes and production methods with which compliance is not mandatory. Like technical regulations, they may also deal with terminology, symbols, packaging, marking, or labelling requirements.[20]

While meeting mandatory technical regulations is a legal prerequisite to market access, complying with voluntary standards is not. Nonetheless, failure to comply with a voluntary standard may effectively exclude a product from a market or significantly reduce the product supplier's ability to contest a market if buyers insist, as a commercial matter, that the standard be met. For example, the ISO 9000 standards covering production processes are voluntary, but many large manufacturers refuse to buy from parts suppliers whose plants are not ISO 9000 certified. They insist that their suppliers implement these standards, many of which have been developed internationally and are recognized by most national standards-setting organizations. Such practices, while voluntary, fall comfortably within the scheme of regulation contemplated by the multilateral trade rules. They deal with quality, which is at the core of any customer-supplier relationship.

Less clear is the practice of large retail distribution chains insisting that all products in certain categories qualify for ecolabelling, particularly in the absence of well-defined and widely recognized criteria for such labels or for labels for products made from materials that are genetically modified. While the multilateral rules may be silent on such practices, their growth may lead to a need to revisit the line between mandatory regulations and voluntary standards, particularly given the scope for abuse in these practices. This is the grey area within the trade rules that may only be clarified through dispute settlement cases under the WTO.[21]

The Rationale for GMO Labels

Consumer products are labelled for various reasons. Labels on food products generally serve the following purposes, *inter alia*: list the ingredients, provide nutritional information and warn against risk such as allergens. There are already numerous GM food products on the North American market. The traditional practice in Canada and the United States regarding GM food products is to require a label if there is a new and identifiable health concern or a substantial alteration in the nutritional composition compared to the traditional, equivalent product. This is a standard requirement for all foods, not just GM products.[22] Canada

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[20] TBT Agreement, Annex I.

[21] See Ramesh Chaitoo and Michael Hart, *Sustainable Forest Management Standards: Issues and Challenges for the Canadian Forest Industry,* Occasional Paper #50 (Ottawa: Centre for Trade Policy and Law, 1998), for a discussion of some of the problems raised by ecolabelling.

[22] Alan McHughen, *Pandora's Picket Basket: The Potentials and Hazards of Genetically Modified Foods.* Oxford University Press, 2000, Chapter12.

and the United States regulate novel organisms on the basis of product novelty rather than the novelty of the process by which the product was developed. The rationale of the regulatory authorities has traditionally been that if a GM product might pose a hazard, so could a conventional product. The hazard, if any, does not arise from the process or production method but from a particular trait(s) of the product.

The contents, quantity, quality or grade of products, as well as nutritional and health and safety information are the standard focus of labels for food products. Labelling also allows consumers to select products according to their taste, lifestyle or beliefs. Labels also allow inspectors to verify whether a product is in compliance with the relevant regulations. It is not mandatory to indicate how a product is produced.[23] However, in the case of organic foods, labels such as "organically grown" or "organically produced" or "organic" indicate how the foodstuff was produced, i.e., it is a PPM label; but this is a voluntary label, not a regulation. Both the European Commission and the United States government are in the process of developing standards for organically grown foodstuffs.[24] By the same token, voluntary labels for GM products to indicate that they are produced using genetic engineering would serve a similar function in the market.

The "right-to-know"

Countries are making individual public policy decisions about the use of biotechnology and its labelling based on national political perceptions of benefits and costs. A key principle in countries that have adopted mandatory labelling policies is that consumers have a right to know whether biotechnology was used to produce the foods they consume. The extent of this right to know is based on a country's culture, economics, and politics. If policy makers believe there is a right to know, they often conclude that cost/benefit analysis is not really relevant or assume that the benefits of consumers knowing will be large enough to outweigh the costs. From this perspective, the right to know is not limited by safety considerations or notions of "sound science." A country may believe consumers have a right to know regardless of safety concerns. If safety concerns are unresolved, the right-to-know argument is strengthened.

Consumer groups argue that a mandatory label for GM products reflects consumers' right to information in order to support informed choice. Some officials in developing countries also see labelling as a means of providing information to authorities in overseas jurisdictions.[25] The right-to-know is a noble principle but is not without problems of its own, including matters related to truth and liability. Interestingly, there is no provision for a "right-to-know-principle" in the international trade rules of the GATT/WTO system. It is significant that none of the mandatory or voluntary labelling schemes that have been proposed have been

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[23] And even nutritional information is not a mandatory requirement in Canada. It is still a voluntary system but it is in the process of being updated.

[24] The US Government notified the WTO in March 2000 of its intent to establish a National Organic Program under the direction of the Agricultural Marketing Service under the US Department of Agriculture. The proposal includes requirements for labelling products as organic and containing organic ingredients. (G/TBT/Notif.00/148), 22 March 2000.

[25] A representative of India argued at the WTO that the requirements regarding whether a product is genetically modified, and its content, should be declared on a product label. He suggested that this would be to the benefit of the countries that do not have the relevant testing facilities and considered it to be a sort of self-certification by the labelling country. WTO Committee on Technical Barriers to Trade, "Minutes of the Meeting Held on 11 June 1999." G/TBT/M/16, 22 July 1999.

on the basis of risk to health. The predominant reason is the consumer's right to know. This is not a justiciable concept under the GATT/WTO rules and it is unclear how it would be handled by a dispute settlement panel.

Policy makers and analysts want to know whether the benefits of labelling outweigh the costs, but this balance depends on the type of program adopted and market conditions. Voluntary labelling programs may be more efficient when a small segment of the population is interested in the GM status of food products and is willing to pay more for products carrying this information.[26] But if the majority of the public wants to know, then mandatory programs may be more effective. On the cost side, the supply chain requirements for segregating products will be the main determinant of costs. The issue is both whether such segregation is feasible for GMOs as well as the cost of such segregation; this, in turn, will depend on how much of the supply chain needs to be segregated for both domestic and export markets. Furthermore, these costs will also differ depending on a range of factors, including the size of the market, the level of complexity of the transport and distribution system, and the rigour of the certification process.

The Practicality of Labelling

European consumers have generally been encouraged by consumer activists to demand labels identifying foods that have been developed through biotechnology. European consumer concerns have been activated by the breakdown in the regulatory system in recent years that resulted in such crises as "mad cow" disease, dioxins in food, and similar problems. The EU has developed mandatory labelling policies but has not yet been able to establish workable regulations or procedures to implement them. EU officials are struggling with technical issues such as which methods to use to identify traces of biotechnology-derived ingredients. They also have to determine what percentage of ingredients in processed foods can be derived from biotechnology and still allow the food to be classified as "biotechnology free" or "GMO free."

Technical Labelling Issues

The first conundrum posed by labelling of GM products is the meaning that will be ascribed to GMOs for the purpose of a label. The second is what will be the definition of "GMO free." Other challenges include:

- Will the program be voluntary or mandatory?
- What standard or threshold will be used to define GMO content?
- How will products be tested to decide on their GMO content?
- How will companies be required to verify GM status?
- Will GM testing or labelling include all ingredients or only some ingredients? If the latter, what percentage of GM content will trigger testing or labelling requirements?
- How will products made from animals that are fed GM feed be labelled?

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[26] In the United Kingdom, Genetic Food Alert, which was founded in 1998, campaigns for GM-free trade and a ban on the production, import and sale of GM foods and crops. Genetic Food Alert operates a labelling and certification system for GM-free foods. Their membership consists of 20 manufacturers, 18 importers/ wholesalers and 101 retailers. Organically grown food is automatically classed as GM-free. (http://www.geneticfoodalert.org.uk/).

The Canadian Federation of Agriculture (CFA) recently decided that it would support the definition of "genetically modified" as being limited to "recombinant DNA (rDNA) technology as this technology can be tested to verify the presence or absence of rDNA material and the tests are practical to use."[27] In the case of the EU, the strict low tolerance level of one percent GMO content has been largely impractical because the testing methods for such a low level are complicated and expensive. Some critics argue that the EU approach is politically appealing but technical superfluous. The Japanese apparently have recently adopted a five percent threshold and rather than testing for GMOs, they rely on management controls to segregate goods. However, the time required and the cost of implementation is yet to be seen. All three instances suggest it is easier to state an objective than to put in place practical procedures for its implementation.

Market and Cost Considerations

What are the likely benefits, costs, and market implications as each country pursues its own labelling policy in the short run? Proponents of biotechnology fear that the diverse labelling requirements, and particularly the mandatory requirements, will harm market acceptance of GMOs. They argue that in this uncertain environment companies may choose an "easy" route of simply not accepting GMOs. However, avoiding GM products is not simpler than accepting GM products if both require certification and labelling. Certifying the *absence* of GMOs in a product may, in fact, be more costly and, in some product areas, very complicated given the prevalence of GM inputs in the processed foods sector. Thus, the market-level acceptance rather than the labelling itself will determine whether companies choose to use GMOs.

Although it is risky to speculate without the benefit of adequate polling data, it is clear that there are some concerns among Canadian citizens about GMOs. Most Canadians may have no or few reservations about consuming GM products if they have been approved by federal regulatory agencies, but they express a belief in the right to know whether a product contains GMOs. In particular, most people react negatively to the transfer of genes from plants to animals and vice versa. Some see this practice as ethically undesirable. Indeed, information about genetically modified vegetable products that contain animal genes may be critical to vegetarians who would not want to consume them. In such instances, mandatory labelling seems a reasonable demand, even though it remains unclear how this can be indicated in a simple GMO label. There are other reasons, such as religious practices and allergies, that could make people avoid GM products.[28] In addition, there is always the possibility of novel allergenicity from GM foods but testing and evaluation by regulatory agencies is designed to intercept all but the most remote possibilities of such developments. Nevertheless, because of the novelty and the mystery of genetic modification, the potential for creating anxiety about the issue remains high in Canada, as elsewhere.

Canadian Consumer Survey Results

Any analysis of the potential market impact of labelling should consider (i) the cost of adding a GM label to existing labelling on packages; and (ii) consumer attitudes towards labelling. As the Canadian Food Inspection Agency (CFIA) pointed out:

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[27] This resolution was approved at the CFA's semi-annual meeting on July 30, 2000.

[28] This is in spite of the fact that the allergen may not carry over to the product in which the gene is inserted. People still feel that they have the right to know and choose to avoid or accept the product. Also, most allergens have common features and their allergenic properties can be reliably predicted. McHughen, p. 161.

> In Canada three major consultations have been held on the topic of labelling of foods obtained through biotechnology. In these consultations, there was strong support for mandatory labelling of foods when significant nutritional or compositional changes have been made in comparison to foods already on the marketplace, and in instances where consumers need to be alerted to a potential health or safety risk to certain segments of the population, such as allergens. For all other cases, the consultations determined that a voluntary labelling approach by food manufacturers or distributors to identify these foods to consumers was also acceptable to the majority of respondents, provided that the label statement was truthful and not misleading.[29]

There are no exhaustive studies on consumer attitudes in the Canadian market but the survey conducted in 1999 illustrates the difficulties inherent in deciding on the right content and approach to labelling (See Annex II).

The Cost of Labelling

Policy makers and analysts want to know whether the benefits of labelling outweigh the costs, but this balance depends on the type of program adopted and market conditions. Voluntary labelling programs may be more efficient when a small segment of the population is interested in the GM status of food products and is willing to pay more for products carrying this information.[30] But if the majority of the public wants to know, then mandatory programs may be more effective. On the cost side, the supply chain requirements for segregating products will be the main determinant of costs. The issue is both whether such segregation is feasible for GMOs as well as the cost of such segregation; this, in turn, will depend on how much of the supply chain needs to be segregated for both domestic and export markets. Furthermore, these costs will also differ depending on a range of factors, including the size of the market, the level of complexity of the transport and distribution system, and the rigour of the certification process.

Biotechnology industry advocates claim that labelling of GM products will add significant cost to a product, but there are no clear studies to indicate this in the Canadian context. A study conducted by Ernst and Young for the Australia-New Zealand Food Authority (ANZFA) concluded that mandatory labelling of GM products would cost industry about 6 percent of turnover in the first year of operation and about 3 percent in subsequent years.[31] KPMG concluded that it was unlikely that the food industry would be able to absorb a 3 percent increase in costs and this would have to be passed on to consumers. They estimated that it could lead to an increase in the cost of food products of 5-15 percent. [32] However, in October 1999, ANZFA Health Ministers reaffirmed their position to adopt universal labelling of GM foods and stated that they did not accept the KPMG cost estimates since they believed the consultants assumed a much more

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[29] CFIA, "Background Paper Towards the First Draft of the CGSB Standard for the Voluntary Labelling of Foods Obtained Through Biotechnology," December 7, 1999. (C**/CGSB-32.315).

[30] In the United Kingdom, Genetic Food Alert, which was founded in 1998, campaigns for GM-free trade and a ban on the production, import and sale of GM foods and crops. Genetic Food Alert operates a labelling and certification system for GM-free foods. Their membership consists of 20 manufacturers, 18 importers/ wholesalers and 101 retailers. Organically grown food is automatically classed as GM-free. (http://www.geneticfoodalert.org.uk/).

[31] A similar study on the potential cost of labelling is being conducted by KPMG in Canada but the results are not yet public.

[32] KPMG, "Report on the compliance costs facing industry and government regulators in relation to labelling genetically modified foods." Canberra, October 1999.

elaborate system of private certification and testing and government oversight than ANZFA envisaged. As a result, a revised economic and financial assessment is being prepared.[33]

It is interesting to note that the KPMG study made reference to "unintended cost consequences stemming from non-compliance with international trade agreements should Australia and New Zealand impose more stringent requirements for consumer information than exist or are proposed in the rest of the world." The study pointed out that legal challenges to the regulations are likely under the WTO.

The Precautionary Principle and Labelling of GM Products

A common rationale offered by opponents of GM products, who demand mandatory labelling, is the precautionary principle. The formulation of the precautionary principle contained in Principle 15 of the Rio Declaration on Environment and Development in 1992 is the following:

> In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

Some commentators argue that in light of scientific uncertainty about the possible long-term risks of GMOs it is appropriate to apply the precautionary principle and limit trade in GM products.

Although the precautionary principle has gained prominence in recent years, particularly in environmental agreements, the WTO has not clearly answered the question of the status of the precautionary principle in terms of international law but in WTO jurisprudence, WTO rules appear to take precedence over the precautionary principle. In the *Beef Hormones*[34] dispute the EC invoked the precautionary principle in support of its claim that its measures were based on a risk assessment. The EC argued that the precautionary principle was or had become a "general customary rule of international law" or at least a "general principle of law." In referring to the SPS Agreement, the EC concluded that application of the precautionary principle meant that it was not necessary for scientists all over the world to agree on the possibility and extent of the risk (from hormone-treated meat); nor for all or most of the WTO Members to perceive and evaluate the risk in the same way. It argued that its import ban on hormone-treated beef was precautionary in nature and satisfied the requirements of Article 2.2 and 2.3 of the SPS Agreement, as well as the requirements of paragraphs 1 to 6 of Article 5. [35]

The Appellate Body stated that it was unnecessary, and probably imprudent, for it to take a position on the important but abstract question of the status of the precautionary principle in international law. It suggested

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[33] See http://www.anzfa.gov.au/documents/gen24_99.asp. The Ministers made reference to: changes to the draft standard made after the KPMG study was commissioned and to the exercise of due diligence in compliance.

[34] WTO, *EC Measures Concerning Meat and Meat Products (Hormones)*, Report of the Panel, 18 August 1997. There were two separate complaints made against the EC on this subject, one by the US (WT/DS26), and one by Canada (WT/DS48). Although both complaints were heard in separate instances before the Panel, the Appellate Body report (WT/DS26/AB/R, WT/DS48/AB/R) applied to both.

[35] "EC Measures Concerning Meat and Meat Products (Hormones)," Report of the Appellate Body, 16 January 1998. WT/DS26/AB/R, WT/DS48/AB/R, 16 January 1998. (para. 121).

that at least outside the field of international environmental law, [the precautionary principle] "still awaits authoritative formulation." [36] But some of its reasoning is ambiguous. On the one hand it pointed out that

> … a panel charged with determining, for instance, whether "sufficient scientific evidence" exists to warrant the maintenance by a Member of a particular SPS measure, may, of course, and should, bear in mind that responsible, representative governments commonly act from perspectives of prudence and precaution where risks of irreversible, e.g. life-terminating, damage to human health are concerned.[37]

However, although the Appellate Body avoided making a clear pronouncement on the status of the precautionary principle in international law, the Appellate Body seemed to emphasize that:

> … the precautionary principle does not, by itself, and without a clear textual directive to that effect, relieve a panel from the duty of applying the normal (i.e. customary international law) principles of treaty interpretation in reading the provisions of the *SPS Agreement.*[38]

While the Appellate Body indicated that the precautionary principle "finds reflection," *inter alia*, in Article 5.7 of the SPS Agreement, it nevertheless upheld the Panel's conclusion that the precautionary principle does not override the provisions of Article 5.1 and 5.2 of the Agreement. [39]

More recently, the WTO SPS Committee discussed the precautionary principle in its meeting on 15-16 March, 2000 when the EU introduced its Communication on the subject.[40] Both developed and developing countries voiced their concerns about the EU policy position and stressed that the SPS Agreement already contained rules to deal with cases where emergency measures were needed but related scientific evidence was not fully available. They stated that a broad application of the precautionary principle in international trade would lead to a situation of unpredictability, which would jeopardize the results of the Uruguay Round. Furthermore, the implementation of precautionary measures without a strict time frame would encourage inefficiency and slow down scientific research.[41]

A fundamental concern among trade specialists is that reliance on the precautionary principle would introduce a new level of uncertainty in international trade, potentially wiping out fifty years or more of progress in developing rules and procedures aimed not only at making trade freer, but also at making the

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36 Op cit. para. 123.

37 Ibid., para. 124

38 Ibid.

39 Ibid., para. 125. This makes one wonder about the breadth of Article 5.7 but perhaps the Appellate Body was considering the fact that Article 5.7 only permits the adoption of provisional SPS measures in the face of insufficient scientific evidence and it obliges Members to conduct a more objective risk assessment (i.e., not on the basis of the precautionary principle) within a reasonable amount of time after taking the measure.

40 For a detailed discussion of the EU position, see Communication from The European Commission on the Precautionary Principle - Submission by the European Communities, June 27, 2000. WT/CTE/W/147 G/TBT/W/137.

41 Countries which cautioned against a broad interpretation of the precautionary principle in the SPS Committee meeting included those who had taken a position against it within the Biosafety Protocol negotiations, as well as some that had favoured it in the Biosafety Protocol framework.

conditions more stable and less unpredictable. The *Beef Hormones* panels and other official trading bodies that have wrestled with issues arising out of the application of the precautionary principle have been acutely aware that its full application could make a mockery of the fundamental governmental responsibility of ensuring that regulatory action related to safety is based on a rigorous assessment of risk. Falling back on the assertion that we do not know the risk and must, as a result, take every precaution, amounts to an abdication of governance. In effect, full application of the precautionary principle would require those opposed to a regulation to prove a negative, i.e., that there is no risk, a task that cannot be satisfied, rather than the more traditional burden of proving that the benefits outweigh the possible risks.[42]

Process and Production Methods (PPMs)

The labelling controversy over GM foods illustrates the dichotomy between labelling based on the method of production, and labelling based on safety concerns raised by products themselves. Over the past decade, there has been increasing tension between the focus by environmentalists on process and production methods (PPMs), and the GATT/WTO focus on the characteristics of products instead. Indeed, most of the trade-environment disputes to date have involved non-product-related PPMs.[43]

The GATT rules have traditionally applied to end products themselves rather than differences in their method of production. The term (PPM) first appeared in the Tokyo Round Agreement on Technical Barriers in which regulations based on it became subject to dispute settlement procedures.[44] However, by the end of the Uruguay Round, PPMs that related to the characteristics of a product were no longer anathema. The WTO TBT Agreement defines a technical regulation as a "document which lays down product characteristics or their related processes and production methods." Generally speaking, governments should not stipulate how products should be made but refer instead to the qualities and properties of products in their technical regulations.

After studying the negotiating history of the TBT Agreement, the WTO Secretariat concluded in 1995 that:

> Standards that are based on processes and production methods (PPMs) related to the characteristics of a product are clearly accepted under the TBT Agreement, subject to them being applied in conformity with its substantive disciplines. The negotiating history suggests that many participants were of the view that standards based inter alia on PPMs unrelated to a product's

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[42] Some European legal commentators have gone to great length to establish the legal basis in emerging customary international law and, to a lesser extent, treaty-based law. Almost all the examples cited are European. See, for example, James Cameron, "The Precautionary Principle," in Gary P. Sampson and W. Bradnee Chambers, eds., *Trade, Environment, and the Millennium* (Tokyo: UN University Press, 1999). Cameron is a British environmental law specialist. The article, while setting out in painstaking detail European and international precedents that give some legitimacy to the status of the precautionary principle in international law, never addresses the fundamental flaw in logic that its application creates. However, the EU does not maintain the extreme position that would require proof of no risk.

[43] Obvious examples are tuna that is harvested in a manner that results in dolphin mortality, and shrimp caught in nets that cause the incidental death of turtles.

[44] "The dispute settlement procedures set out above can be invoked in cases where a Party considers that obligations under this Agreement are being circumvented by the drafting of requirements in terms of processes and production methods rather than in terms of characteristics of products." (Article 14.24).

characteristics should not be considered eligible for being treated as being in conformity with the TBT Agreement.[45]

A mandatory labelling program that seeks to identify imports manufactured or harvested by a PPM which does not affect a product's physical characteristics, may not be consistent with WTO rules. Some ecolabelling programs present a dilemma in this regard. In particular, non-product-related PPMs are problematic under the international trade rules and they can lead to trade disputes.[46]

The Biosafety Protocol and Labelling of GMOs

The Biosafety Protocol, which was negotiated as part of the Convention on Sustainable Development[47] has become linked to the controversy over GMOs and GM products. The Protocol is unclear in certain areas and is subject to interpretation. It applies to the transit, handling, and use of living, modified organisms (LMOs), undergoing trans-boundary movement that may have adverse effects on the conservation and sustainable use of biological diversity, taking into account risks to human health. Interestingly, Canada's position is that references to human health in the Protocol apply to effects on human health resulting from an LMO's adverse impact on biodiversity and do not incorporate considerations related to the consumption of food. This may not necessarily be the position taken by other governments.

It is important to note that the Protocol only applies to living modified organisms—those that can replicate or reproduce genetic material. It does not apply to non-living products derived from LMOs such as wood, processed food products, and food additives.[48] A significant ambiguity in the Protocol is that it does not apply to LMOs that are pharmaceuticals for human consumption, provided that they are addressed by other relevant international agreements or organizations. But in spite of this exclusion, member countries are still free to conduct risk assessments on any LMO, including pharmaceuticals for humans, before deciding to import them.

The interface between the Biosafety Protocol, the precautionary principle, and labelling of GM products is somewhat complicated. The Protocol permits countries to take a precautionary approach to the import of LMOs for intentional introduction into the environment, as well as those for direct use as food, feed, or for

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45 (WT/CTE/W/10; G/TBT/W/11), 29 August 1995, p. 2.

46 See Atsuko Okubo, "Environmental labeling programs and the GATT/WTO regime." *Georgetown International Environmental Law Review*, 11:3, Spring 1999, pp. 599-646.

47 "Cartagena Protocol on Biosafety to the Convention on Biological Diversity (CBD)." It was adopted in January 2000 by the 176 parties that belong to the CBD. (www.biodiv.org/biosafe/protocol/Protocol.html).

48 Five types of LMOs are identified in the Protocol:

- LMOs for pharmaceuticals for humans, that are excluded from the Protocol subject to a condition (Article 5);
- LMOs in transit that are not subject to the core provisions on import (Article 6);
- LMOs for contained use in facilities such as laboratories, that are not subject to the core provisions on import but are subject to documentation requirements specific to this use (Article 6 and 18);
- LMOs for intentional introduction into the environment, that are subject to provisions in the Protocol specific to this use (Articles 7-10 and 18);
- LMOs for direct use as food, feed, or for processing that are subject to provisions on import and documentation requirements specific to this use (Articles 11 and 18).

processing.[49] Groups that would like to restrict international trade in GM products refer to the precautionary principle embedded in the Protocol and argue that this should be extended to the trading system for all products containing GM ingredients. Also, Article 18 of the Protocol requires that LMOs for release into the environment be accompanied by documentation that identifies them as LMOs. Some environmentalists have taken this to mean that GM products should be labelled as such. However, negotiations leading up to the Protocol indicate the underlying objective of the documentation was to meet certain shipping, customs and other administrative requirements not labelling of individual food products.

Furthermore, while some activists cite the Biosafety Protocol as a major achievement and suggest that domestic policies regarding GMOs take their cue from the Protocol, the fact that it is not yet in force is often overlooked.[50] It is therefore premature to expect governments to apply concepts and principles in the Biosafety Protocol to current trade policies on a widespread basis.

GATT/WTO Rules Relevant to the Labelling of GM Products

Although each WTO Member government has a sovereign right to regulate products in the manner that bests suits the local political, cultural, and natural environment, major problems can arise when a country's domestic laws and regulations conflict (or are inconsistent) with its international trade obligations. The level of risk tolerance varies greatly among countries, even among OECD countries. National regulations reflect different concerns across jurisdictions about all products (not just food) but an attempt has traditionally been made in the international trade rules to facilitate the movement of goods. In this section we will examine the approach taken in the GATT and newer WTO Agreements.

GATT 1994

Any regulation or measure (even a mandatory labelling requirement) whose effect restricts trade is subject to basic GATT law. A regulation can come under scrutiny if the challenging party can establish that the regulation is contrary to GATT Articles III[51] or XI[52]. In order to show a prima facie violation of Article III a complaining party must demonstrate that: (i) the offending measure is an internal regulation that affects the sale, purchase or use of the product; and (ii) the imported product that is negatively affected by the measure in question is equivalent to or "like" the domestic product that the regulation refers to. If the complaining country establishes these facts, the defending country can resort to GATT general exceptions

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[49] The precautionary approach is reaffirmed in the Preamble to the Biosafety Protocol. Article 1 further states: “In accordance with the precautionary approach contained in Principle 15 of the Rio Declaration on Environment and Development, the objective of this Protocol is to contribute to ensuring an adequate level of protection in the field of the safe transfer, handling and use of living modified organisms resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health, and specifically focusing on transboundary movements.”

[50] The Biosafety Protocol must be ratified by 50 States or "regional economic organizations" in order for it to come into force. (Article 37). It is open for signature up to 4 June 2001. The United States has not ratified the 1992 Convention on Biological Diversity and hence participated in the Biosafety Protocol negotiations only as an observer.

[51] Article III, the national treatment clause, prohibits internal taxes and regulations that serve to protect domestic products from competition or give them an unfair advantage.

[52] Article XI prohibits quantitative restrictions except in very limited circumstances stipulated therein. It provides for import restrictions on agricultural or fisheries products with three clearly defined conditions.

under Article XX which covers various types of measures. But the chapeau sets out critical disciplines on the use of such exceptions:

> Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures:
>
> (a) necessary to protect public morals;
>
> (b) necessary to protect human, animal or plant life or health; …
>
> (g) relating to the conservation of exhaustible natural resources if such measures are made in conjunction with restrictions on domestic production.[53]

A measure may also be maintained under the national security exceptions under Article XXI that is unilaterally triggered but little use of this has been made so far.[54] An Article XX defence of a mandatory labelling requirement for GM products would imply that it is a sanitary measure to protect human, animal or plant life or health.

Since 1979, the GATT Tokyo Round Agreement on Technical Barriers to Trade (Standards Code) has contained disciplines on the extent of government intervention in market access relating to technical regulations. Governments retain significant latitude to control and regulate food products for health and sanitary reasons. They can also exercise great leverage in terms of technical standards. But it is safe to say that the WTO rules at the conclusion of the Uruguay Round negotiations further tightened the basis under which any country can prohibit, restrict, or impose conditions on the import of any food products. If a country does not resort to GATT exceptions to defend its regulatory measure regarding GMOs, it may alternatively seek cover under the newer WTO agreements.[55] The two WTO agreements that are most relevant to international trade in GMOs are the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) and the Agreement on Technical Barriers to Trade (TBT). The first is generally considered in terms of primary produce and living organisms and is intended to discipline measures relating to plant and animal health regulations, particularly in agricultural trade. The second addresses measures relating to a wide range of products and sets out rules governing standards and technical regulations.

The SPS Agreement

The aim of the SPS Agreement is to prevent domestic SPS measures from having unnecessary negative effects on international trade and to guard against their use for protectionist purposes. The Agreement covers measures adopted by Member governments to protect human or animal life from food-borne risks; human health from animal or plant-carried diseases; and animals and plants from pests and diseases. The specific aims of SPS measures are thus to ensure food safety and to prevent the spread of diseases

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53 GATT Article XX contains 10 categories of exceptions but the ones on health/safety, conservation reasons and public morals may be the most plausible in the case of GM products.

54 However, the United States maintains restrictions on trade with Cuba under this Article.

55 Interestingly, in its request for consultations regarding the Egyptian ban on tuna packed in soybean oil, Thailand made reference to GATT Articles 1, XI and XIII and Articles 2, 3 and 5 of the WTO Agreement on Sanitary and Phytosanitary Measures (SPS). As well, Thailand cited Annex B Par. 2 and 5 on publication of regulations and notification obligations. (Note 3 above).

among humans, animals and plants. The most important disciplines on a government's regulatory powers are contained in Article 2 (para. 2 and 3):

1. Members shall ensure that any sanitary or phytosanitary measure is applied only to the extent necessary to protect human, animal or plant life or health, is based on scientific principles and is not maintained without sufficient scientific evidence …

2. Members shall ensure that their sanitary and phytosanitary measures do not arbitrarily or unjustifiably discriminate between Members where identical or similar conditions prevail … Sanitary and phytosanitary measures shall not be applied in a manner which would constitute a disguised restriction on international trade.

Furthermore, there is an obligation to base SPS measures on risk assessment. However, Article 5.7 allows room for governments to take pre-emptive measures in instances in which there is recognizable risk or the threat thereof even when there is scientific uncertainty, albeit for temporary periods. It stipulates that:

> In cases where relevant scientific evidence is insufficient, a Member may provisionally adopt sanitary or phytosanitary measures on the basis of available pertinent information, including that from the relevant international organizations as well as from sanitary or phytosanitary measures applied by other Members. In such circumstances, Members shall seek to obtain the additional information necessary for a more objective assessment of risk and review the sanitary or phytosanitary measure accordingly within a reasonable period of time.

Most commentators argue that the notion of the precautionary principle is contained in this article although it is not specifically mentioned. (See the EU's argument in the *Beef Hormones* case below).

While there is no overt mention of labelling *per se* in the SPS Agreement, the definition of an SPS measure in the Annex includes "… packaging and labelling requirements directly related to food safety."

Although the SPS Committee has not yet been requested to address issues related to trade in GMOs, it can be argued that certain measures aimed at regulating such trade could reasonably fall within the scope of the SPS Agreement. This is because measures related to GMOs may be intended to protect human or animal life from food-borne risks or protect plants from pests and diseases. Given the scientific uncertainty about the impact of GMOs on the environment, avoiding the transfer of genetic material and associated traits from bio-engineered varieties to traditional varieties could be regarded as similar to protecting plants from pests and diseases.[56] In other words, measures related to GMOs may fall under the spirit, if not the letter, of the SPS Agreement. The International Plant Protection Convention (IPCC) is identified as a key

[56] The SPS Agreement uses the levels of protection specified in international standards, guidelines, and recommendations as a baseline for examining the levels of protection provided by measures implemented by WTO Members. Annex A to the SPS Agreement lists the applicable international standards for food safety, animal health and zoonoses, and plant health. With regard to food safety, the applicable standards are those established by the Codex Alimentarius Commission ("Codex"), an international body to which most WTO Members belong. Note, however, that the Codex standards are voluntary.

standard-setting body under the SPS Agreement. If live GMOs such as plants or micro-organisms are found to be plant pests, they may be considered under IPCC rules and standards.[57]

It is important to remember that an SPS measure may only be taken in respect of ***risk*** to human, animal or plant life or health in the territory of a Member. To date, there exists no broadly accepted scientific evidence of any such risk arising from GMOs. This is probably the biggest barrier to a WTO Member's relying on the SPS Agreement in restricting trade in GMOs. Likewise, the obligation to base all SPS measures on an objective risk assessment would be the first obligation relied upon by a WTO Member complaining of a measure alleged not to be in compliance with the SPS Agreement.

The TBT Agreement

As in most WTO agreements, the TBT Agreement contains both a national treatment and a most-favoured-nation (MFN) requirement. WTO Members must ensure that technical regulations, standards, and related conformity assessment procedures treat products imported from other Members no less favourably than like products of national origin or those originating in any other country. Members must also "take such reasonable measures as may be available to them" to ensure most-favoured-nation (MFN) and national treatment are extended by local governments and non-governmental bodies to products originating in other Members.[58]

Perhaps the most critical obligations of the TBT Agreement are contained in Article 2.2:

> Members shall ensure that technical regulations are not prepared, adopted or applied with a view to or with the effect of creating unnecessary obstacles to international trade. For this purpose, technical regulations shall not be more trade-restrictive than necessary to fulfil a legitimate objective, taking account of the risks non-fulfilment would create. Such legitimate objectives are, *inter alia*, national security requirements; the prevention of deceptive practices; protection of human health or safety, animal or plant life or health, or the environment. In assessing such risks, relevant elements of consideration are, *inter alia*, available scientific and technical information, related processing technology or intended end uses of products.

These are quite rigorous conditions but to date there has not been any trade dispute under the WTO TBT Agreement that has led to a panel interpretation of Article 2.2.[59] The interpretation of the specific rules

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[57] IPPC working group meeting on June 13-16, 2000 on "Phytosanitary Aspects of GMOs, Biosafety and Invasive Species." *BRIDGES Weekly Trade News Digest*, Vol. 4, No. 25, June 27, 2000.

[58] TBT Articles 3, 4, and 5 respectively. The Code of *Good Practice for the Preparation, Adoption and Application of Standards* (Annex 3) further stipulates the same for standards (par. D). It also requires that "standards are not prepared, adopted or applied with a view to, or with the effect of, creating unnecessary obstacles to international trade" (par. E).

[59] In the most recent relevant WTO jurisprudence the Panel in *EC- Asbestos* interpreted a technical regulation to mean a requirement that is a condition for marketing a product in a particular Member state. "The Panel therefore concludes that, taking into account the ordinary meaning of the words "characteristics" and "product", the definition of "technical regulation" in Annex1.1 to the TBT Agreement applies to the measures which define the technical specifications that one or more given products must meet in order to be authorized for marketing in a Member." *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products*, (WT/DS135/R), 18 September 2000, para. 8.43.

thus remains to be tested.[60] The expression "with a view to or with the effect of creating unnecessary obstacles to international trade" suggests that even though a regulation or technical measure is not conceived as protectionist or is not necessarily designed to restrict trade, if it is judged to have such an effect, directly or indirectly, it will be WTO-illegal. There is further qualification in the phrase, "shall not be more trade-restrictive than necessary to fulfil a legitimate objective, taking account of the risks non-fulfilment would create." Furthermore, it is significant that "legitimate objectives" are defined in relation to the traditional GATT exceptions: national security; the prevention of deceptive practices; animal or plant life or health; an includes specific reference to the environment as well. There is a long GATT/WTO tradition on "the necessity test" that may be quite controversial in the case of trade measures to restrict GMOs.

Members are required to adopt internationally agreed technical regulations and standards wherever possible. If international regulations or standards do not exist for a product, or if they would be inappropriate because of various local factors, Members may adopt domestic regulations or require specific standards to fulfil a legitimate objective. In a similar vein, Members are urged to participate as fully as possible in international standardizing bodies and to accept as equivalent the technical regulations of other Members, even if different from their own, if they are satisfied that the other's regulations adequately fulfil the objectives of their own regulations.[61]

The TBT Agreement also stipulates that conformity assessment procedures must not be unduly trade-restrictive. For example, WTO Members are to play as full a role as possible in the development of internationally agreed assessment procedures for internationally agreed regulations and standards and, where such procedures exist, Members are to use them.

Both the SPS and TBT Agreements encourage the use of international standards. However, under the SPS Agreement, scientific arguments resulting from an assessment of the potential health risks are the only permissible reasons for not using such standards for food safety and animal/plant health protection. In contrast, under the TBT Agreement, WTO Members may decide that international standards are not appropriate for other reasons, including technological problems or geographical factors.[62]

It is difficult to judge whether labelling of GMOs would be considered under the SPS or TBT Agreement in a dispute settlement case. However, it can be argued that labelling is more relevant to the TBT Agreement since there is specific reference to it in the preamble:

> *Desiring* however to ensure that technical regulations and standards, including packaging, marking and labelling requirements, and procedures for assessment of conformity with technical regulations and standards do not create unnecessary obstacles to international trade; (emphasis added).

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[60] There have been several cases considered under the SPS Agreement and the WTO jurisprudence is leading to a clearer interpretation of its rules. Canada and France disputed an issue under the TBT Agreement regarding the classification and labelling of scallops that was settled short of a Panel ruling.

[61] The *Code of Good Practice* sets out similar provisions for standards. Central government standardizing bodies must adhere to the code and members must "take such reasonable steps as may be available to them" to ensure their local governments and non-governmental standardizing bodies also accept and comply with the code.

[62] WTO. "Understanding the WTO Agreement on Sanitary and Phytosanitary (SPS) Measures," Geneva, May 1998. (http://www.wto.org/english/tratop_e/sps_e/spsund_e.htm).

Furthermore, it also appears in Annex 1 in the definition of a technical regulation and a standard—"marking or labelling requirements as they apply to a product, process or production method." All things considered, in light of the fact that labelling of GM products would hardly be considered an SPS measure, it is logical to conclude that it would be more likely to be considered under the TBT Agreement.

NAFTA Obligations on TBT and SPS

The rules of the North American Free Trade Agreement (NAFTA) on technical regulations and standards (Chapter 9) are based largely on the WTO rules. The definitions of a "technical regulation," "standard" and "standards-related measures" are analogous to those in the WTO TBT Agreement. In particular, a technical regulation may include, among others, "marking or labelling requirements as they apply to a good, process, or production or operating method." The main objective of the NAFTA rules on TBT is to ensure that technical standards are applied on a non-discriminatory basis on goods and certain services of Canadian, US, and Mexican origin. Where there are differences between national standards, the rules seek to reduce the trade impacts by promoting compatibility, equivalence, and notification and information exchange requirements.

Indeed, the NAFTA obligations are quite rigorous and since mandatory labelling of GM products will not be considered as "a measure relating to safety, the protection of human, animal or plant life or health, the environment or consumers"[63] it most likely would be considered illegitimate if it restricts trade. However, if a NAFTA Party argues that mandatory labelling is necessary to meet one of the mentioned objectives, it would then have to meet the risk assessment test. Article 907(2) stipulates that any measure (level of protection) that a NAFTA Party considers appropriate should not:

a) Result in arbitrary or unjustifiable discrimination against goods or service providers of another Party;
b) Constitute a disguised restriction on trade between the Parties; or
c) Discriminate between similar goods or services for the same use under the same conditions that pose the same level of risk and provide similar benefits.

A further obligation is the reliance on available scientific evidence in conducting an assessment of risk in order to justify a technical regulation. A country may take temporary measures to minimize risk but is obligated to base its technical regulations on proper risk assessment. [Article 907(3)].[64] At the present time, none of the regulatory agencies in Canada or the United States claim that GM foods pose a health risk so any government that imposes mandatory labelling on GM foods or products on the basis of health considerations will be hard-pressed to support its case.

To date, there has not been any relevant dispute settlement case under the NAFTA. A recent initiative by the US government to require mandatory country-of-origin labelling for meat products to appease cattle

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63 NAFTA, Part Three, Technical Barriers to Trade, Article 904(1) (Basic Rights and Obligations).

64 "Where a Party conducting an assessment of risk determines that available scientific evidence or other information is insufficient to complete the assessment, it may adopt a provisional technical regulation on the basis of available relevant information. The Party shall, within a reasonable period after information sufficient to complete the assessment of risk that is presented to it, complete its assessment, review and, where appropriate, revise the provisional technical regulation in the light of that assessment."

industry lobbyists who had been looking for a means of dealing with competition from Canadian imports was settled at the consultation stage. The US Department of Agriculture (USDA) had also reported that the country-of-origin labelling requirement for meat would be inconsistent with WTO rules.[65]

Similarly, the NAFTA obligations on sanitary and phytosanitary measures (Chapter 7, Section B) contain similar disciplines on regulatory measures. First of all, any SPS measure[66] that is adopted, maintained or applied is:

(a) based on scientific principles, taking into account relevant factors including, where appropriate, different geographic conditions;
(b) not maintained where there is no longer a scientific basis for it; and
(c) based on a risk assessment, as appropriate to the circumstances.[67]

The SPS measures of a NAFTA Party should not "arbitrarily or unjustifiably discriminate between its goods and like goods of another Party, or between goods of another Party and like goods of any other country, where identical or similar conditions prevail." (Article 712.4). In addition, NAFTA Parties must rely on international standards, guidelines or recommendations with the aim of making their SPS measures equivalent or identical to those of the other Parties. A further requirement is that a government that maintains an SPS measure that is not based on international standards, guidelines or recommendations must provide the reasons for the measure to the Party that is adversely affected by it (Article 713).

It would be very difficult for non-science-based reasons for mandatory labelling of GM products to meet these rigorous disciplines for SPS measures in the NAFTA. It is also highly likely that mandatory labelling of GM products would be found to contravene NAFTA rules on the grounds that they are technical barriers to trade.

It is also interesting that in the domestic US context, mandatory labelling was found to be beyond the scope of the US Federal Food, Drug and Cosmetic Act (FFDCA).[68] In two court cases (*Stauber v. Shalala* and *International Dairy Foods v. Amestoy*), US courts ruled against mandatory labelling requirements for milk produced with recombinant bovine somatotropin (rBST), a hormone that increases milk production in cows.[69] Since rBST was a very controversial political issue, the Food and Drug Administration (FDA) had extensively reviewed the safety data on rBST submitted by the manufacturer, Monsanto, as well as numerous published studies. Furthemore, the FDA's review was further reviewed by independent national and international bodies. The FDA concluded that rBST posed no safety risk and approved its use in November 1993.

In *Stauber v. Shalala* a consumer group challenged the FDA's decision **not** to require labelling of products from cows treated with rBST. However, in 1995 the court ruled that consumer opinion alone was

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65 *Americas Trade*, Aug. 12, 1999.

66 An SPS measure is defined, among others, to include "a packaging and labelling requirement directly related to food safety" (Art. 724).

67 Article 712.3 (Scientific Principles).

68 The FFDCA does not provide a basis for requiring labelling of foods produced through novel methods but with no material change in characteristics.

69 The hormone (rBST) is genetically engineered and it stimulates milk production in cows but the milk itself is not genetically modified.

not sufficient to require labelling without a determination that a product differs materially from the type of product that it claims to be.[70] In *International Dairy Foods v. Amestoy* several dairy producers' associations successfully challenged the state of Vermont's mandatory labelling law for rBST-derived products on Constitutional grounds. Vermont law had required that milk products from cows treated with rBST be labelled to help consumers make informed purchasing decisions (the "right to know" principle). Since the FDA had found that there is no significant difference between milk from rBST-treated cows and milk from cows that were not treated with rBST, the Vermont Court of Appeals concluded that by forcing the dairy manufacturers to make an involuntary statement on their products contrary to their views, the statute infringed on the First Amendment freedoms of the producers and caused them harm.[71]

Goldman (2000) argues that the statutory framework for food regulation in the US "imposes significant impediments to any mandatory labelling requirement" for GM foods. In any event, because the US and Canadian economies are closely integrated, Canada must pay close attention to what the United States does on labelling of GMOs. There would be significant trade ramifications if either country introduced a mandatory labelling system while the other country maintains a voluntary regime. However, if the United States introduces mandatory labelling (a very unlikely possibility), Canada would be under strong pressure to follow suit.

The Trade Policy Implications of Mandatory Labelling Requirements for GMOs

Issues concerning trade in GMOs have already been raised in the WTO Committee on Technical Barriers to Trade and various countries have notified the Committee of national labelling requirements. The main issue discussed to date is whether GM products are substantially equivalent to traditional products (i.e., the "like product" dilemma). This was prompted by the EU regulation that prescribes specific labelling requirements for food and food ingredients produced from genetically modified soya beans or generically modified maize.[72] Exporting countries challenged the EU's differentiation between GM and non-GM crops. They argued that the EU's approach would have a negative impact on trade in those products and set an inappropriate example for future regulation of food and agricultural products.[73]

If Canada were to introduce a mandatory labelling requirement for GM products, it could be challenged under the WTO's TBT Agreement, since the labelling requirement would be a technical regulation or standard.[74] The Government of Canada maintains that mandatory ecolabelling schemes clearly fall within the scope of the TBT Agreement to the extent that they are based on requirements about the product's

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70 Karen A Goldman, "Labeling of genetically modified foods: legal and scientific issues." *Georgetown International Environmental Law Review*, 13:3, Spring 2000, pp.717-760. This article presents an insightful analysis of the mandatory labelling issue in the domestic US context and examines some interesting cases.

71 Goldman, Op. cit.

72 EC Regulation No. 1139/98.

73 G/TBT/W/78, 27 August 1998, and G/TBT/W/94, 16 October 1998. The TBT Committee discussed this issue in its meetings on 15 September 1998, 11 June 1999, and 1 October 1999.

74 See John Fredland, "Unlabel their Frankenstein foods! Evaluating a U.S. challenge to the European Commission's labeling requirements for food products containing genetically-modified organisms." *Vanderbilt Journal of Transnational Law*, 33:1, Jan 2000, pp. 183-220. He argues that the United States should challenge the EU's mandatory labelling requirement for GMOs at the WTO and that the regulation would be found to violate WTO rules.

design, characteristics, or performance as well as PPMs that have a direct impact on the product's characteristics.[75]

It is also important to remember that an SPS measure may only be taken in respect of risk to human, animal or plant life or health. Since the reason proposed for mandatory labels is to inform consumers, not mitigate health risks, the Agreement on Sanitary and Phytosanitary Measures (SPS) would not be relevant. Furthermore, Article 1.4 of the SPS Agreement, states that: "Nothing in this Agreement shall affect the rights of Members under the Agreement on Technical Barriers to Trade with respect to measures not within the scope of this Agreement." In effect, Article 1.4 provides that if a measure is a technical regulation under the TBT Agreement, it cannot, at the same time, be an SPS measure and is not subject to the SPS Agreement.

In theory, the country that challenges a mandatory labelling requirement for GM products could advance some or all of the possible arguments below.

"Like product"

The labelling requirement might be considered to discriminate between "like products" — i.e., that a GM product and non-GM product are the same in terms of product characteristics. The Canadian requirement that the GM product be labelled, but not the non-GM product, would be discriminatory in the sense of GATT Article III:4.[76] The requirement could also be challenged as being inconsistent with the national treatment obligation contained in Article 2.1 of the TBT Agreement.[77] However, it should be pointed out that a complainant would have to advance a claim of a de facto national treatment or MFN violation since the labelling requirement is unlikely to distinguish explicitly between domestic products and imports, or among imports from particular WTO members, or to be limited exclusively to imports. While the issue of "like product" and national treatment would be contentious to both opponents and proponents of GM product, there is a considerable body of GATT/WTO jurisprudence in this area. In fact, as early as 1970, a GATT Working Party suggested a number of criteria to determine likeness on a case-by-case basis in the context of Article III, including the product's end-uses in a given market, consumers' tastes and habits, the product's properties, nature, and quality.[78]

The GATT does not provide a definition or guidance on the question of determining "like product" even though this concept is found in two of the main provisions: Article I (most-favoured-nation (MFN) treatment) and Article III (national treatment). In a number of decisions, the WTO Appellate Body has

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[75] These aspects fall within the scope of Articles 2, 3, 10, and 14 of the TBT Agreement. See WTO Committee on Trade and Environment, "Elements of a Possible Understanding to the TBT Agreement: Ecolabelling" (Communication from Canada).WT/CTE/W/21G/TBT/W/21, 21 February 1996.

[76] "The products of the territory of any contracting party imported into the territory of any other contracting party shall be accorded treatment no less favourable than that accorded to like products of national origin in respect of all laws, regulations and requirements affecting their internal sale, offering for sale, purchase, transportation, distribution or use."

[77] Note that if a measure is found to be inconsistent with GATT Article III:4 it may not be necessary to enter into further analysis of whether the measure is warranted as a technical regulation under the TBT Agreement. This approach was taken by the Panel in *United States - Standards for Reformulated and Conventional Gasoline*. WT/DS2/R, 20 May 1996. (para. 6.43).

[78] *GATT Working Party on Border Tax Adjustments*, BISD 18S/97, para. 18.

clearly stated that the determination of likeness is to be made after considering a number of specific factors. In both *Japan - Taxes on Alcoholic Beverages*[79] and *Canada - Periodicals*,[80] the Appellate Body adopted the factors that were outlined by the 1970 Working Party on Border Tax Adjustments. In brief, the factors that are now generally considered in the evaluation of likeness of products are the product's properties, nature and quality, its end use, consumer tastes and habits and its tariff classification.

In the *Asbestos*[81] case Canada argued that the likeness of products should be considered on a case-by-case basis and the European Commission (EC) contended that asbestos and asbestos-containing products on the one hand, and substitute products, on the other, are not like products. The EC argued that:

> The nature, composition, physical properties and proven effects on human health of chrysotile make it radically different from substitute products. In such a situation, the health risk posed by the product must necessarily be taken into account. A dangerous product should be regarded as being different in nature and quality from a harmless or less dangerous product.[82]

The Panel followed the same reasoning as in *Japan - Taxes on Alcoholic Beverages* and *Canada – Periodicals*. It also pointed out that the risk of a product for human or animal health has never been used as a factor of comparison by panels applying the concept of "likeness" within the meaning of Article III. It reasoned that introducing a criterion on the risk of a product into the analysis of "likeness" would nullify the effect of GATT Article XX(b). The Panel concluded that is it not appropriate to apply the risk criterion proposed by the European Commission to any of the "likeness" criteria invoked by the parties, particularly the properties, nature and quality of the product. [83]

All of these cases has implications for the mandatory labelling issue regarding GM products. By this reasoning, and considering that end-uses in a given market and consumers' tastes and habits may differ, a GM product and a non-GM product will be "like" products, i.e., not distinguishable from each other. As a result, it could be argued that mandatory labelling discriminates against the imported GM product.[84]

Interestingly, the United States challenged EU Regulation No. 1139/98 on "Compulsory Indication of the Labelling of Certain Foodstuffs Produced from Genetically Modified Organisms" at a meeting of the WTO Committee on Technical Barriers to Trade. The regulation requires that a food or food ingredient produced from GM soya beans or GM corn that contains DNA or protein resulting from such genetic modification bear the words "produced from genetically modified soya" or "produced from genetically modified maize," on the ingredient list or on the food label. The US government stated:

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79 *Japan - Taxes on Alcoholic Beverages*. Report of the Appellate Body. (AB-1996-2), 4 October 1996. WT/DS8/AB/R; WT/DS10/AB/R; WT/DS11/AB/R.

80 *Canada - Certain Measures Concerning Periodicals*. Report of the Appellate Body. WT/DS31/AB/R, 30 June 1997.

81 *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products,* (WT/DS135/R), 18 September 2000.

82 WT/DS135/R. Op. cit., (para. 8.119).

83 Op. cit. (para. 8.129 - 8.132). It is likely that the Appellate Body might be asked to scrutinize the reasoning of the Panel on this issue.

84 A further case against the differentiation is the fact that there is no distinguishable risk in the GM product compared to the non-GM product. However, if the *Asbestos* Panel's reasoning and conclusions are upheld by the Appellate Body, risk factors will not be used in deciding on the "likeness" of products.

> The regulation is based on the assumption that foods and food ingredients produced from genetically modified soybeans or corn that contain protein or DNA resulting from genetic modification are not "equivalent" to their conventional counterparts. Nowhere in the preamble, in the regulation, nor in the EU's July response is an empirical basis or other indication provided as to why the presence of protein or DNA resulting from genetic modification would render the food different in any material respect (i.e., "composition, nutritional value or nutritional effects") from like products that did not result from genetic modification. In its response to the US comments, the EU states that it remains convinced that the presence of DNA or protein resulting from genetic modification differentiates a biotechnology product from other "traditional" products. However, the EU does not in any way claim that this regulation is promulgated to address any particular risk to human or animal health. Indeed, the United States is unaware of any evidence that would demonstrate that genetically modified varieties as a class differ from conventional varieties in composition, nutritional value or nutritional effects. We, therefore, have questions about what the EU's legitimate objectives are with respect to providing "proper information to the final consumer" and are concerned that, in fact, the labelling requirements imposed by the regulation could contribute to consumer deception.[85]

The argument above appears likely to be the same argument that might be presented to a dispute settlement panel. It raises a familiar and tested GATT principle about a new technology and attitude that has no obvious, clear response. Furthermore, it raises questions of science and technical processes that go well beyond the competence of the WTO. It is likely that if this argument were to be considered by a Panel, expert witnesses would be called for advice. In the final analysis, however, the Panel would make its decision strictly on the basis of WTO rules.

"Necessity" test

Another basis for challenging a mandatory labelling regulation could be that it is not a "necessary" barrier to trade. This presents a more complicated argument and it is less clear how a panel might rule. To a large extent, it depends on the level of scientific certainty or uncertainty about the risks posed by GM products. As is now normal procedure, the WTO Panel would rely on experts in the field to inform it about the safety issues relating to GM products.[86] In addition, as in the *Beef Hormones* case, a risk assessment based on scientific evidence may be required before a government takes a decision to restrict trade in or require labelling of GM products. It is expected that risk assessments will become increasingly relevant in WTO disputes relating to SPS measures, technical standards and environmental issues.

"Least trade restrictive"

A third GATT/WTO requirement is that measures must be the "least trade restrictive" available.[87] A panel might need to consider whether a mandatory labelling requirement for GM products is the least trade

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85 Submission by the United States to the Committee on Technical Barriers to Trade, 16 October, 1998. (G/TBT/W/94).

86 Panels have made extensive use of this "expert" option in five cases so far: *Beef hormones*; *Australia - Measures Affecting the Importation of Salmon*, (WT/DS18/R), 12 June 1998; *Japan - Measures Affecting Agricultural Products* (WT/DS76/R), 27 October 1998; *United States - Import Prohibition of Certain Shrimp and Shrimp Products*, (WT/DS58/R), 15 May 1998; *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products*, (WT/DS135/R), 18 September 2000.

87 The "least trade restrictive" requirement has been applied in GATT and WTO jurisprudence in numerous cases and is now considered a tradition.

restrictive policy intervention that a government could take to address even legitimate concerns about GM products, given the level of scientific uncertainty at this moment.[88] This might be the weakest argument to oppose labelling because in many respects labelling could be considered a much softer action compared to a total ban on GM products, or quotas on the number of GM products, or controls on imports of selected types of GM products. Indeed, the Panel in the *Asbestos* case pointed out that "a ban by its very nature is the most restrictive market access measure."[89] The Panel in the *Beef Hormones* case seemed to indicate likewise. (See below). Nevertheless, even if a mandatory labelling requirement was judged to be the least trade restrictive measure, it would have to be justified under a GATT exception. Note that Article 2.2 of the TBT Agreement also stipulates this.

Article XX (b)

While in theory it may be argued that Article XX (b) provides for an exception to the GATT and WTO disciplines for measures addressing human health concerns, closer scrutiny indicates that it does not apply to mandatory labelling of GM products. The reason is simple. No labelling scheme is couched in terms of human health considerations. Rather, mandatory labelling is based on consumers' right to information about the products they purchase. Indeed, the most compelling factor in labelling of GM products is identification, not health protection. This will automatically disqualify a mandatory labelling regime from the shield of Article XX (b) because it has traditionally been very strictly interpreted.

In recent years, dispute settlement Panels have tried to weigh health concerns with trade concerns and relied on risk assessment while upholding GATT principles. The *Asbestos* trade dispute between Canada and France involved a challenge by Canada of a complete French ban on all uses of all types of asbestos on health grounds.[90] Canada argued that banning asbestos is a disproportionate and an unnecessarily extreme measure, because regulation (i.e., "controlled use") of asbestos can render the remaining hazards to workers and society "undetectable" and, hence, acceptable. This case sheds light on the capacity of the WTO legal system to safeguard human health in spite of trade interests. The WTO Panel ruled in favour of France. The Panel rejected Canada's claim that the ban constitutes an unnecessary obstacle to trade under Article 2 of the TBT Agreement. It concluded that the ban is not a technical regulation and, therefore, does not fall within the scope of the TBT Agreement.[91] The Panel stated that although the French ban was incompatible with national treatment provisions outlined in Article III of the GATT, France nevertheless had a right to apply the ban under GATT Article XX (b). Although the Panel report is subject to scrutiny by the Appellate Body, its ruling in this matter is significant because it is the first time

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88 We use the term "uncertainty" here advisedly. While the preponderance of scientific opinion is that GM products are safe for human consumption, many scientists would also agree that the long-term impact of GMOs on the environment and on human, animal, and plant life remain somewhat uncertain because there has as yet been insufficiently long experience with GM products.

89 WT/DS135/R, Op. cit., para. 8.49.

90 Ibid.

91 The Panel reasoned that "… if the Members had agreed that the TBT Agreement also applied to general bans, they would undoubtedly have mentioned it. It would appear that the purpose of the TBT Agreement is to prevent much more complex situations than a straightforward unconditional ban on a product, which is covered by the very strict provisions in Article XI:1 of the GATT 1994." (Ibid., para. 8.49).

that a Panel has specifically allowed a WTO Member to use this provision of Article XX to impose trade restrictions.[92]

But it is also important to note that the EU had to establish that asbestos posed a real risk to human life or health. [93] Secondly, the Panel also considered whether the measure was "necessary." The extent to which the Panel relied on "scientific evidence" to arrive at its conclusion and upheld the French ban on import of asbestos is also important. It is logical to assume that such tests will also be applied in the case of a dispute over GM products.

Implications of WTO Jurisprudence

Considering the discussion in the sections above, it is perhaps safe to conclude that a mandatory labelling scheme for GM products is unlikely to satisfy the requirements of GATT Article III and perhaps the TBT Agreement as well. It would not fall under Article XX exceptions either. The OECD reported in May 2000 that certain Member states face challenges in reconciling social, economic, environmental and ethical aspects of the products of biotechnology, with science-based regulatory frameworks. This is the policy dilemma facing governments all over the world because the arguments for restrictions on trade in GM products and calls for mandatory labelling are not based on scientific reasons.[94]

At this stage, there is a strong basis for a government to invoke the dispute settlement provisions of the WTO to challenge any of the mandatory GMO labelling schemes existent today. That decision, however, may depend on a range of factors, including the extent to which mandatory labelling of GMOs is required in different countries. Some analysts believe the EU is aware that its GMO labelling regime might not withstand a challenge under the WTO and that is the main reason why it has delayed the implementation of the regulations to enforce the original Directive.

The Trade Implications of Voluntary Labelling of GMOs

All of the rules in the TBT Agreement refer to government measures or regulations or initiatives taken by national or sub-national jurisdictions, i.e., in the public domain, or in formal institutional channels. It is not clear whether the TBT Agreement's disciplines apply to non-governmental organizations. The Agreement defines "non-governmental body" in a rather clumsy manner as a "body other than a central government body or a local government body, including a non-governmental body which has legal power to enforce a technical regulation." This has implications for voluntary labelling schemes initiated by non-government

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92 It is important to remember that Article XX only applies to justify measures that are otherwise inconsistent with the GATT only, and not to inconsistencies with the TBT or SPS agreements. Furthermore, in the case of the SPS Agreement, the opposite is true—measures conforming to the SPS Agreement are presumed by Article 2.4 to be consistent with Article XX(b) of the GATT.

93 The Panel indicated: "… we note that the carcinogenicity of chrysotile fibres has been acknowledged for some time by international bodies. This carcinogenicity was confirmed by the experts consulted by the Panel, with respect to both lung cancers and mesotheliomas, … We therefore consider that we have sufficient evidence that there is in fact a serious carcinogenic risk associated with the inhalation of chrysotile fibres." (WT/DS135/R, Op. cit., para. 8.188).

94 See Ozzie Silverman, "International Approaches to Non-Science Issues in Regulating the Products of Biotechnology" (September 2000) for an interesting analysis of the situation in several countries. The report was prepared for the Canadian Biotechnology Advisory Committee.

agencies. To date, no voluntary standard has been challenged at the WTO since exporters do not necessarily have to meet them. If the nature of the industry is such that the standard becomes a *de facto* requirement, then manufacturers generally meet the standards. If they do not, their competitors will take their market share.

The reference to "power to enforce" a technical regulation suggests that the target might be institutionalized agencies rather than non-governmental organizations (NGOs) in the conventional sense of the word. There may be a lacuna in the case of standards or labelling schemes that are commercially driven, such as GMO labels introduced by an industry group, or sustainable forest certification, in which consumers, retailers, and producers have developed a system outside of the traditional standards channels.

Canada has argued that voluntary labelling standards are subject to the notification provisions of Annex 3 (*Code of Good Practice*) of the TBT Agreement, regardless of the kind of information provided on the label. Canada has also argued that bodies that develop and run ecolabelling programs should be considered as standardizing bodies. The Canadian government contends that:

> Although the term "recognized body" is not expressly defined, it is arguable from the definitions of the ISO/IEC Guide 2:1991 that legal or administrative entities (including organizations, authorities, companies and foundations) which are recognized on a national, regional, or international level constitute "recognized" bodies. The term "recognized body" is broader in its scope than "standards body" or "national body," which are more specific; thus, one can conclude that voluntary standards established by non-traditional standards-setting bodies fall within the scope of the standards definition. Members should therefore acknowledge that as ecolabelling programmes are established by standardizing bodies, they should take reasonable measures to ensure that such standardizing bodies, *whether governmental or non-governmental*, accept the Code of Good Practice. [emphasis added][95]

The federal government also maintains that the TBT Agreement should be interpreted to provide for ecolabelling programs that use certain standards based on non-product-related PPMs, provided that such programs are developed according to multilaterally agreed guidelines to minimize the possibility of discrimination and trade-distortion. This reasoning can be easily extended to labelling of GMOs.

In the final analysis, a clear meaning of the scope and substance of the TBT rules on voluntary standards and non-governmental bodies will only be arrived at if and when the WTO rules officially on this matter. This, however, would require either a government to pursue a trade dispute leading to the formal intervention of a dispute settlement panel, or a decision or understanding adopted by the Ministerial Conference. It is unlikely that any government would challenge a voluntary labelling scheme since it is not a pre-condition for market access. In reality, most exporters are not concerned about voluntary standards. A decision or understanding is also unlikely because the commercial considerations are not sufficiently compelling to overcome the controversy that would be generated in any discussions and negotiations necessary to lay the groundwork for such an initiative.

There are two GATT/WTO disputes in which labelling was discussed, although it was not the basis on which the cases were brought to dispute settlement panels. The first case was the *Tuna-Dolphin*[96]

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[95] WTO Committee on Trade and Environment, "Elements of a Possible Understanding to the TBT Agreement: Ecolabelling" (Communication from Canada).WT/CTE/W/21G/TBT/W/21, 21 February 1996, p. 3.

[96] *United States – Restrictions on Imports of Tuna*. Report of the Panel (DS21/R). GATT, BISD, Supplement No. 39, December 1993. pp. 155-205.

dispute between the United States and Mexico in 1991 which involved the labelling of canned tuna as "dolphin safe." This Panel report was never adopted and even if it had been adopted by the GATT Council, the GATT dispute settlement system had no means of compelling the United States to implement the Panel's recommendations. The second is the famous *Beef Hormones* case between the US and the European Union (and Canada and the EU) which the EU lost and which it has sought to settle by accepting retaliation from the US and Canada rather than by bringing its measures into conformity with the WTO requirements. They will be discussed further below.

Mandatory Labels: "GMO Free" or "Contains GMOs"?

In principle, a mandatory labelling regime would not raise legal issues in terms of the choice between the type of label, i.e., positive ("contains GMO") or negative ("GMO free").[97] The choice of either a positive or negative label will depend on technical factors that affect the feasibility and cost of testing products. This in turn can have implications in the context of the WTO. As the Committee on TBT emphasized at its first triennial review:

> When considering the preparation of a technical regulation, it is important for Members first to identify the related problem, including its magnitude and the legitimate objective; and then consider all options available consistent with the Agreement, bearing in mind that in accordance with Articles 2.2 and 2.3 a technical regulation shall not be more trade restrictive than necessary to fulfil a legitimate objective, and shall not be maintained if the circumstances or objectives giving rise to its adoption no long exist or if the changed circumstances or objectives can be addressed in a less trade-restrictive manner.[98]

In other words, the regulation must be proportional to the problem that it is seeking to address. This may be considered the GATT/WTO "proportionality test."

"GMO Free"

Considering the thousands of food products that are directly consumed and the thousands more that are used in food processing, it would be prohibitive to label all products that do not contain GMO inputs.[99] Since at this point in time, the vast majority of products do not contain GM ingredients, it would be a logistical nightmare to label all of them. For practical purposes, it would be best to label the products that contain GM ingredients although even these are difficult to trace.[100] Nevertheless, there appears to be a rapidly growing market for "GMO free" food products.[101] Runge and Jackson (2000) point out that there

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97 Note that ANZFA is considering two negative labels: (i) a "GM-free" label to indicate that a product is absolutely free of genetically modified organisms; and (ii) a less demanding claim such as "not sourced from genetically modified ingredients." They are also considering two positive labels: (i) "genetically modified;" and (ii) "may be genetically modified or may contain genetically modified materials." (Speech by Ian Lindenmayer, Managing Director of ANZFA. Op cit.

98 See G/TBT/5 (97-5092) 19 November 1997. (http://www.wto.org/english/tratop_e/tbt_e/tbt5.htm)

99 The seven genetically modified crops grown commercially in 1999 were soya bean, corn, cotton, canola/rapeseed, potato, squash, and papaya. However, extracts (lecithin) from GM soya bean are widely used as ingredients in many processed foods in North America and elsewhere and this is very difficult to track.

100 See McHughen (2000), Chapter 12 for a discussion on the technical task of labelling GM products.

101 Note that food distribution companies around the world, including Sainsbury's, Marks and Spencer, Pryca, Carrefour, Archer Daniels Midland, and Nestle have responded to consumer concerns about segregation of GMO foods from traditional products. They have indicated their intent to avoid GM foods in their distribution

is a significant emerging market for products carrying a "no GMO" identity even in the United States. They also suggest that negative labels would avoid the potential information biases of positive labels.

While labelling per se would not necessarily be challenged at the WTO, the indirect effect of the regulatory requirement for labelling can be scrutinized if it creates an onerous burden on exporters. A "GMO free" label would be the most problematic because it would require that GM and non-GM products be segregated throughout the production, storage, and distribution chain. This can add significant cost to the final product and make it prohibitive for exporters to contest a market because it would require the establishment of two or more parallel storage, transport, and processing systems. This would be extremely burdensome for suppliers and difficult to justify, given the questions raised earlier with respect to the objectives of the labelling regulations.

Another issue is whether the label is meaningful. If a product is labelled "GMO free" how does one prove the assertion, since negatives cannot be proven? A "GMO free" label would also have to address if, when, or how often tests would be required to determine if protein or DNA from genetic modification is present. It will be very difficult to enforce such a regulation. There is no single test to determine whether protein and DNA from genetic modification appears in a product. There are a growing number of extremely sensitive tests for protein and DNA. However, these tests are used primarily for research purposes and are both time-consuming and expensive. This would literally lead to withdrawal by exporters from the market that requires the "GMO free" label. Although it is possible that a standard test may be developed, deciding on such a test can be quite discriminatory since some countries might not have the equipment or facilities to test thousands of products on a regular basis in a cost effective manner.

Furthermore, some scientists point out that the regulation may have to provide guidance on choosing the specific proteins or segments of nucleic acids to be monitored. In order for a supplier or regulator to test for the presence of DNA or protein from genetic modification, it would be necessary to know which protein, or specific piece of DNA, is being monitored. The variety and number of traits that are introduced into crops via modern biotechnology are increasing rapidly. As the new biotechnology products enter the market, the complexity and difficulty of such testing will become increasingly onerous. This could be interpreted as "more trade restrictive than necessary to fulfil a legitimate objective" in the event of a challenge at the WTO.

Another concern relates to technical considerations regarding products such as vegetable oils, for instance, that contain no detectable DNA or protein, GM or otherwise. Should they be labelled as "GMO free"? But what if the oil was made from GM corn or soya bean? If the oil came from GM corn, then in principle it should not have a "GMO free" label, even if GM traces are not detectable, otherwise consumers who wish to avoid products of GM origin might be misled. A related concern is that some manufacturers can capitalize on this as a marketing ploy and collect a premium for "GMO free" oil.

"Contains GMOs"

If consumers prefer to be assured (for whatever reasons) that the food they are eating does not contain products of genetic modification, the "may contain" or "contains GMO" option would be preferable, but

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operations. (Runge and Jackson, 2000). More recently, MacDonald's announced that it would not use GM potatoes in its French fries.

inadequate. This option would notify consumers of any possibility that the products might have been the result of genetic modification, without requiring that all products be tested. Consumers would be able to choose the products that do not contain GMOs. In some respects, if regulations require that GM products be labelled, manufacturers may prefer a vague label such as "may contain GMOs" because they can avoid liability claims and do not have to perform expensive testing and quality control. However, the accuracy of such labels is always questionable and the labels may not be meaningful. Most countries have recognized the need to decide on the threshold level of GMOs that is permissible: What percentage? Should it apply to every ingredient or just the product itself? These are very contentious issues.

Some critics point out that positive labels can be almost as misleading as no label at all. In theory, a positive label indicating GMO content may imply risk and lead consumers to consider health consequences of consuming GM products. While a positive mandatory label ("contains GMO") will tend to discriminate among like products in terms of the international trade rules, it can also serve a useful purpose to provide information to consumers in the same way that other labels do. The GATT/WTO consistent option would be a voluntary label, whether positive or negative. Furthermore, as we note below, WTO Panels have accepted the legitimate utility of labels in the past.

A further reason for having positive labels is the increasing interest in "functional foods" and "neutriceuticals"[102] that have particular performance enhancing characteristics. Some manufacturers may want to advertise the fact that their product is genetically modified if it contains a particularly desirable enhanced quality or attribute.

There are no studies on the market impact of positive labels for GM products but there seems to be a general view in several countries that if there are GMOs in food products, people must have access to that information on the product itself.

Voluntary Labels: Positive or Negative

The question of the WTO-consistency of voluntary labels for GM products can be considered in light of previous GATT rulings on voluntary labels. The *Tuna-Dolphin* case illustrates the rules in this regard. The reasoning of the Panel is important to voluntary labelling of GM products:

> The Panel noted that the labelling provisions of the DPCIA do not restrict the sale of tuna products; tuna products can be sold freely both with and without the "Dolphin Safe" label. Nor do these provisions establish requirements that have to be met in order to obtain an advantage from the government. Any advantage which might possibly result from access to this label depends on the free choice by consumers to give preference to tuna carrying the "Dolphin Safe" label. The labelling provisions therefore did not make the right to sell tuna or tuna products, nor the access to a government-conferred advantage affecting the sale of tuna or tuna products, conditional upon the use of tuna harvesting methods.[103]

As a consequence, the Panel found that the "Dolphin Safe" labelling provisions in the US legislation did not contravene GATT rules. The same would apply in the context of GM products if manufacturers were not obligated to label products that contain GM ingredients.

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[102] A neutriceutical can be defined as any product that has a specific benefit to people's health or well being.

[103] *United States—Restrictions on Imports of Tuna*. Report of the Panel, (DS21/R), para. 5.42.

In the *Beef Hormones* case, although the Panel did not rule on the legitimacy of measures to protect non-health related consumer concerns, the comments of the Panel on labelling might be considered directly relevant to voluntary labelling of GM products.

> …. Likewise, the ability of any Member to enact measures which are intended to protect not consumer health but other consumer concerns was not addressed. In this regard, we are aware that in some countries where the use of growth promoting hormones is permitted in beef production, voluntary labelling schemes operate whereby beef from animals which have not received such treatment may be so labelled.[104]

In this instance, one could reasonably argue that the Panel pointed to the possibility that labelling could be considered a less trade-restrictive option to a ban on imports. However, the Panel was careful not to make any pronouncements on mandatory labelling or whether the EU should have used a voluntary labelling system as an alternative to an import ban on hormone-treated beef.

Nevertheless, the discussion between the Chairman of the Panel and the experts who were asked to testify also point to the apparent acceptance of labelling as a means of informing consumers how a product was produced.[105] In particular, the Chairman had some difficulty with the written views of one of the experts who testified that it would not be feasible to label hormone-treated meat:

> The next point is relating to the labelling. … There are two approaches. You could have voluntary labelling basically of meat which has not been treated, what we call green labels, and you can have mandatory labelling of treated meat, which has to be enforced. Reading this question, do you think labelling would be a feasible approach? If not, in what ways would this labelling procedure differ from the controls already carried out by the EC to ensure that imported meat has not been treated with hormones at all? Is the fact that one cannot distinguish between treated and untreated meat sufficient reason not to label meat? What is the difference between labelling already carried out today, even with respect to meat, such as this meat is BSE-free or American meat, or French meat, and labelling for purposes as to whether meat is or is not treated with hormones? *I mean that labelling is a major policy today in making or leaving decision to consumers*.[106] (italics added).

The discussion above seems to clearly indicate that the notion of voluntary labels to allow informed consumer choice is acceptable in the WTO, but it appears unlikely that mandatory labels would be treated similarly.

Although voluntary labels may not be incompatible with WTO rules, the concerns regarding the choice between labels that state "GMO free" or "contains GMO" are the same as in the case of mandatory labels. Nevertheless, the issues regarding testing and verification are less salient because they will not necessarily be challenged in a trade dispute. However, if domestic producers develop and implement a voluntary labelling scheme and internalize the cost of such a regime (or pass it on to consumers) while foreign producers do not, it can lead to some competitive advantage for imported products. Hopefully, the

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104 Report of the Panel, Par. 8.274

105 The Panel Report ends with an Appendix containing the transcript of the Joint Meeting with Experts. This transcript was entered into the reports of both the Panel established at the request of the United States and that established at the request of Canada, and contains an interesting discussion on various possible labelling schemes which could be enacted and the purposes for doing so (mainly consumer information).

106 Report of the Panel, Par. 838.

labelled products, which would be more expensive, will be appreciated by consumers who may have demanded them in the first place.

Political Economy Issues: Is There Room to Manoeuvre?

Although international agreements are not cast in stone, the GATT/WTO system tends to be cautious in its approach to change. In the 47 years that the original GATT was in force, the text was amended or revised on only three occasions: in 1948 to take account of the ITO negotiations; in 1955 at the end of the Review Session; and in 1965 with the addition of Part IV to reflect issues related to special and differential treatment for developing countries. Since then, changes have only been made on the basis of interpretative decisions and understandings, each of which has been highly negotiated. Even with implementation of the WTO in 1995, necessary changes to the GATT were achieved on the basis of decisions and understandings rather than by amendments to the text.[107] Any amendment to accommodate mandatory labelling or restraints on the import of GM products, therefore, would require a major negotiating effort. Success on such an initiative would seem remote.

It can be argued that to date there have been few compelling reasons to amend the GATT. It is only in the 1990s that new challenges such as trade-environment issues and, more recently, technological developments (GMOs) have put pressure on the GATT rules. Nevertheless, there does not appear to be a major or credible constituency to promote or lobby for significant changes to any of the GATT/WTO rules on a piecemeal basis. The focus is more on expanding and deepening the rules, rather than amending them. Indeed, the international community is investing a significant amount of energy in trying to launch a new multilateral round of negotiations at this time. The major players are unlikely to be receptive to any other obtrusions on their efforts in this area. Within the context of a major new round, of course, the scope for negotiation and accommodation is much better.

Eventually, the WTO will have to discuss the issue of trade in GM products. In preparation for the Seattle Ministerial in 1999, Canada proposed that the WTO:

> … establish a Working Party on biotechnology in the WTO with a fact finding mandate to consider the adequacy and effectiveness of existing rules as well as the capacity of WTO Members to implement these rules effectively. One year after its establishment, the WP would report on its findings to the Steering Body (to be established at Seattle) and provide any conclusions it considered appropriate".[108]

Similarly, Japan proposed that the WTO establish an appropriate forum to address new issues, including GMOs. This could be "a sub-group of an independent negotiating group on agriculture to identify topics on food-related matters of GMOs." Such a group would consider, *inter alia*:

- whether the relevant WTO agreements (SPS, TBT, and TRIPs) are capable of responding to GMO-related matters;
- what is the current situation of Members with regard to their evaluation on the safety of GMOs and the labelling of food containing GMOs; and

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[107] See Michael Hart, *Fifty Years of Canadian Tradecraft: Canada and the GATT 1947-1997* (Ottawa: Centre for Trade Policy and Law, 1998) for a review of GATT's history and Canada's involvement in the evolution of the agreement.

[108] WT/GC/W/359, 12 October 1999.

- what would be the appropriate way for the WTO to deal with the contents and outcomes of discussions of other international fora.[109]

These proposals were incorporated into the 19 October 1999 Draft Ministerial Declaration as a plan to establish a Working Party on Biotechnology with a fact-finding mandate to consider the adequacy and effectiveness of existing rules as well as the capacity of WTO members to implement these rules. Furthermore, the intention was to have disciplines to ensure that trade in products of agricultural biotechnology is based on transparent, predictable, and timely processes.

In Seattle, there were preliminary discussions on these proposals. The United States confirmed that its intention was not to give the WTO the task of assessing the scientific basis of Members' decisions to allow them to prohibit certain products in their markets, but rather to give the WTO a role with respect to the process by which countries approve bio-engineered agricultural products. The European Commission attempted to reconcile its differences with the United States in this area by endorsing a working group on biotechnology, on the condition that such a group would have a fact-finding rather than a negotiating mandate and would be part of a comprehensive package on environment-related issues. It also reconfirmed its firm position to exercise its rights to bar agricultural and food products on safety grounds. However, the EU environment and trade ministers reversed the Commission's position and opposed discussion on biotechnology in the WTO.

There were several reasons behind this change in position. Some environmental interest groups thought that the establishment of a WTO working group on biotechnology would jeopardize the successful conclusion of the negotiations on the Biosafety Protocol. Some critics thought that the WTO was not the right forum for developing a multilateral approach to biotechnology issues. It was also feared that by giving a specific mandate to the WTO, trade considerations would be given precedence over environmental concerns. After the EU ministers opposed the Commission's initial position, the Commission declared that it would accept a working group on biotechnology only if all countries pledged to work in good faith to conclude the biosafety talks and agreed on a broad negotiating agenda in the WTO which would include environmental and consumer issues. The negotiations on the Biosafety Protocol have since been concluded but the dilemma of GM foods and trade in biotechnology products has not changed.

Official attitudes towards GMOs in developing countries are mixed but the larger food producers like Brazil and India seem positive about the technology. Yet many LDCs are concerned and skeptical about the safety of GM products.[110] The issues raised in the context of the GMO debate are very contentious, and like GM products, they break new ground. If the international community strongly believes that there should be special rules for trade in GM products, or that the current rules need to be clarified or amended to accommodate public concerns about them, there should be multilateral negotiations on this issue. After all, the WTO is a policy making body and it should give directions to the dispute settlement process so that Panels and the Appellate Body can have a clear mandate to follow when adjudicating any dispute

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[109] WT/GC/W/365, 12 October 1999.

[110] At the International Grains Council 2000 Conference on 14-16 June in Regina, Hassan Khedr, the Egyptian Minister of Supply and Internal Trade, warned delegates that food importing developing countries could become the unwilling recipients of genetically modified food products. He raised the question of how to avoid using LDCs as guinea pigs for GM products.

regarding GMOs. The creation of a Working Group on Biotechnology would be the first step in addressing this issue.

Conclusions and Recommendations

In the final analysis, there are two main considerations for Canadian policy makers. First, the level of uncertainty regarding the possible interpretation of the TBT Agreement and the likelihood that mandatory labelling of GM products would not meet GATT exceptions, are sufficient reasons to be very cautious about introducing any mandatory scheme. Second, the technical difficulties in implementing an effective, practical, and credible labelling scheme in the Canadian market suggests that it is best to examine international and various national approaches before introducing labelling of any kind. It is advisable that the Canadian government defer any consideration of a mandatory labelling scheme for GM products. The status quo remains the best option for the moment.

If several countries introduce mandatory labelling regulations for GM products in spite of the possibility of a WTO challenge, the situation will be somewhat similar to the apparent incompatibility of trade restrictions in multilateral environmental agreements (MEAs) with WTO rules. To date, there has been no challenge in this area, although it has long been believed that the trade restrictions in some MEAs are contrary to GATT/WTO rules.[111] The practical approach would be for a WTO Panel and/or the Appellate Body to deal with the problem when it arises in a trade dispute. It is therefore important to closely monitor developments in the Thailand-Egypt trade dispute over prohibitions on tuna packed in soya bean oil. If the case goes to a dispute panel, there should be some clarification of the status of GM products versus non-GM products under the WTO rules although the measure is a ban and not a mandatory labelling regulation.

The voluntary approach to labelling of GM products currently underway through the Canadian General Standards Board is the best option for the foreseeable future. (See footnote 18 above). It involves the major stakeholders and a careful consideration of a market response to demands for labelling of GM products by Canadians. Furthermore, although it is clear that many Canadians think that they have the right to know whether products contain GMOs, there does not seem to be a compelling desire among the Canadian public for mandatory labelling of all GM products, even in the face of a clearly articulated view regarding opposition to GMOs by some activist groups.

The prudent course would be to remain on the current policy path. In light of the discussion above it would be useful to consider the following options:

1) Considering Canada's heavy reliance on international trade for economic growth, it is not in Canada's best interests to have several different labelling regimes in overseas markets. Furthermore, a domestic voluntary standard that is different from other countries will still be a market impediment. Canada should continue to work in international forums, particularly the Codex Committee on Food Labelling,

[111] Two examples are: the Montreal Protocol on Substances that Deplete the Ozone Layer; and the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal. However, one cannot equate unilateral measures, even by several countries, with measures taken pursuant to an MEA. It is more likely that the former would be found inconsistent with the WTO rules than the latter, under the dispute settlement system. The WTO system is complaint driven. To date, the probability of a trade measure under an MEA has not triggered a WTO complaint because is it more a matter of potential than actual harm. The same is unlikely to hold for mandatory labelling of GM products.

to develop an international voluntary standard for labelling of GM foods. It will be some years before there is a consistent global approach to trade in biotechnology products. The federal government should continue to work in multilateral forums to ensure that:

(a) trade in biotechnology is transparent and fair, to allow all countries access to both the latest technology and markets; and
(b) all national governments retain the right to introduce measures to address any threats that biotechnology may pose to human, plant or animal life.

2) Canada should resurrect the proposal to establish a Working Party on Biotechnology in the WTO in order to address the critical trade-related aspects of GMOs. A group of this nature could examine the various issues and work towards building multilateral consensus on the treatment of GM products in international trade.

3) Canadians must ensure that any labelling regime for GMOs that emerges from the national voluntary process is practical and credible. If it is too complicated or difficult to implement it will lead to confusion in the marketplace.

4) There may be a need to monitor international approaches to the role of non-science in regulating the products of biotechnology. It is unlikely that the WTO regime will accommodate the "right to know" how goods are produced in the immediate or distant future. In the meantime, a voluntary approach to labelling of GM products should address the concerns of Canadians who want to know which products are genetically modified or have GM ingredients for religious, ethical or other reasons.

5) The trend towards mandatory labelling schemes that started with the European Union suggests the need for paying closer attention to the actions of other governments on this issue, as Canada's market access in these nations could be hampered. It might be advisable to create an inventory of national and international regulatory responses to the labelling of GMOs, including an overview of the probable effect of these measures on Canada's trade with these nations.

6) In the meantime, the Canadian regulatory authorities (CFIA, Health Canada, and Agriculture Canada) should continue to test and evaluate GMOs rigorously to ensure their safety for human and animal consumption. This will protect the health of the Canadian public and at the same time facilitate international trade. A possibly useful compromise approach that would meet public demands is to require mandatory labelling of GM foods in two instances:

(a) when significant nutritional or compositional changes have been made in comparison to foods already in the marketplace; and
(b) in instances where consumers need to be alerted to a potential health or safety risk to certain segments of the population.

This is the current practice for all foods, but if the genetic manipulation of foods creates detectable new risks to specific consumers, then special labelling will be appropriate.

ANNEX I

National Initiatives on Labelling of GMOs

European Union

In 1997, European Union regulations[112] established mandatory labelling when a product consists of or contains genetically modified organisms. The presence of DNA or protein resulting from genetic modification is the basis for triggering labelling of food. For products consisting of a mixture of GMOs and organisms not genetically modified, the possible presence of GMOs must be indicated. Revisions to the regulations[113] which came into force in April 2000, extended labelling requirements to include GM additives and flavourings used in food. Only a one percent *de-minimis* threshold level (of each ingredient) for GM material in food ingredients derived from non-GM sources will be allowed. In January 2000, the EC also presented a proposal for a directive that will include a requirement for animal feeds to be labelled.[114] But this is not yet in effect. The EC is hoping that the revised Directive involving labelling will be adopted by autumn 2000 with transposition into national law by spring 2002.

Australia and New Zealand

The Australia-New Zealand Food Standards Council agreed on October 1999 to implement a strict mandatory labelling system for genetically modified foods and products containing GM ingredients. Manufacturers and producers would be responsible for reporting accurate levels of GM content. It is expected that the ANZFA labelling regulations will be endorsed in September 2000 and come into effect in September 2001. In order to give food manufacturers and importers time to ascertain the status of their products and revise their labels, the new standard will take effect twelve months from publication in the official gazette.

Japan

The Japanese government introduced labelling requirements in 1999 for final products containing genetically-modified organisms, in response to consumers' concerns. The law applies to 30 commodities, including corn, soya beans, sweet potatoes, and tomatoes. While labelling standards were expected to be released by April 2000, compliance with them will become mandatory by April 2001.[115]

Canada

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112 Regulation EC No 258/97; Directive 97/35/EC; and Directive 90/220/EEC

113 Commission Regulation (EC) No 50/2000, 10 January 2000, OJ L 006, 11 January 2000, pp. 15-17, and Commission Regulation (EC) No 49/2000 of 10 January 2000, OJ L 006, 11 January 2000, pp. 13-14.

114 Commission of the European Communities, Proposal for a European Parliament and Council Directive amending Directive 79/373/EEC on the marketing of compound feeding stuffs, COM(1999) 744 final, 2000/0015, 7 January, 2000.

115 *MAFF Update*, No 345, February 4, 2000. (www.maff.go.jp/mud/345.html).

In September 1999, the Canadian Council of Grocery Distributors (CCGD), representing about 80 percent of Canadian food industry retailers, agreed to develop a voluntary GMO-labelling regime in partnership with the Canadian General Standards Board. To date, the stakeholders have apparently agreed on a definition of GMO to refer only to recombinant DNA (rDNA).

Thailand

In October 1999, Thailand announced a partial ban on imports of genetically modified seeds pending clear scientific evidence on their safety. A committee to consider the safety of GM products has recently been set up by the Public Health Ministry. In response to consumers' concern, the Thai Food and Drug Administration is considering imposing a mandatory labelling system for all products using genetically modified organisms, starting in 2001. The threshold in terms of how much GMO content in a product should warrant labelling has not yet been decided. A pre-condition for the implementation of the proposed labelling system will be to equip the authorities concerned with the technology needed for testing GM products.[116]

In September 2000, Thailand formally requested consultations with Egypt (under the dispute settlement procedures of the WTO) regarding the Egyptian prohibition on importation of canned tuna with soybean oil from Thailand.[117] The Egyptian ban was apparently triggered by concerns that the oil is made from genetically modified soya beans.

South Korea

The Republic of Korea passed legislation in March 2000 regarding mandatory labelling of genetically modified soya bean, corn and soya bean sprouts. It will enter into force in 2001.[118]

United States

On May 3, 2000, the Clinton Administration announced that the Food and Drug Administration (FDA) will develop guidelines for voluntary efforts to label genetically modified food products under their authority. The guidelines will address both positive and negative labels—containing or not containing bio-engineered ingredients—in a truthful and not misleading manner, consistent with the requirements of the Federal Food, Drug and Cosmetic Act.

Saudi Arabia

In August 2000, Saudi Arabia announced a ban on the import of foods containing GMOs. The announcement is not clear as to whether it is a complete ban or a combination of increased scrutiny and a labelling requirement.

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116 "Genetically Modified Organisms. Labels to be introduced by next year", *Bangkok Post*, 16 March 2000.

117 Egypt - Import prohibition on canned tuna with soybean oil. Request for consultations by Thailand. 27 September, 2000. (WT/DS205/1; G/L/392; G/SPS/GEN/203).

118 G/TBT/Notif.00/1, 10 January 2000.

ANNEX II

Summary of Canadian Consumer Survey re GMO Labels[119]

This study, conducted by the National Institute of Nutrition in Ottawa, was based on a series of focus group sessions held across Canada in 1999. It was the first of its kind to address the question of consumer interpretation and understanding of voluntary label messages as they could apply to foods derived through biotechnology. This study resulted in the following key conclusions on consumer understanding of voluntary labelling messages:

- The wording of labelling messages considerably affects the level of consumer understanding. Further, there is a link between this understandability and the consumer's perceived value of a label message. Consumers want to be informed through label messages, that:
  - are simple;
  - are linked to nature and natural processes by which a food is produced, e.g. grown, farming agriculture;
  - indicate that a product has been improved in a manner relevant to the consumer, e.g. improved flavour, longer lasting; and,
  - are linked to government regulatory approval.
- Consumers tend to react negatively when unknown scientific terminology is used.
- Most labelling messages proposed worldwide would not likely be understood by consumers, e.g. "contains genetically modified x," "product of biotechnology." These messages, while scientifically truthful, appear to be misinterpreted, and in many cases generate concern among consumers. For instance, they were interpreted to mean foods that included "chemicals" or preservatives, or that were not grown normally, i.e. not from a seed planted in soil.
- Consumers, in general, do not want unclear messages applied to foods. For example: numerous messages on foods containing multiple ingredients from biotechnology would be viewed as too "complex", "unreadable"; foods with the message "do not contain" products of biotechnology would be viewed as "putting down competitors"; and foods identified with the message "may contain" products of biotechnology, the product manufacturer would be viewed as "incompetent" for not knowing their product better.
- Labelling is seen as important but is not viewed as a "panacea" solution. Other means of providing information such as television, leaflets (including recipes), in-store taste tests, the Internet, magazines and 1-800 numbers, were identified as acceptable means of providing information to consumers.

In addition, the study confirmed knowledge generated from previous studies about the following characteristics of the "average" Canadian food shopper:

- Most people shop for food hurriedly.
- Most shoppers would not notice new labelling messages.
- Label reading is more prevalent when buying a product for the first time.

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[119] CFIA. "Voluntary Labelling of Foods From Biotechnology: Report on a Qualitative Study Among Canadian Consumers by the National Institute of Nutrition," Ottawa, Ontario, April 1999. http://www.cfia-acia.agr.ca/english/ppc/biotech/labeti/ninlabe.shtml.

- The level of awareness of foods from biotechnology is low.
- The main sources of information about new foods are the mass media, recipe leaflets, word of mouth and advertising in general.
- Food labels were not mentioned “top of mind” as a source of information.
- Consumers believe that new foods are likely evaluated for safety by government departments and agencies, but they are not sure that the authorities are able to monitor everything.

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