

# THE ROLE OF CONSUMER PREFERENCE IN THE REGULATION OF GENETICALLY MODIFIED ORGANISMS

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*“People fear that which they do not understand.”*

With progress comes increased fear of the unknown. Technological advancement in recent years has led to controversial topics such as the ethics of cloning, the morality of harvesting stem cells for scientific research, and the safety of genetically modified food and organisms. The consumer frenzy over genetically modified organisms (GMOs) has been strongest within the European Union (E.U.), where even public figures such as Prince Charles have actively participated in the dialogue.<sup>1</sup> As the debate over GMOs continues to rage, governments across the world are left to consider the appropriate extent to which consumer preference and scientific risk assessment should factor into their decision-making process. Though it must be acknowledged that governments will, to some extent, be politically motivated by consumer preference, the authors conclude that the regulation of GMOs must be based on scientific principles and evidence to avoid the imposition of discriminatory trade barriers, which violate the principles of international trade law.

## THE INTERNATIONAL FRAMEWORK

THE INTERNATIONAL FRAMEWORK governing issues on GMOs is centered on the General Agreement on Tariffs and Trade (GATT) and two complementary agreements - The Sanitary and Phytosanitary Measures Agreement (SPS Agreement) and The Technical Barriers to Trade Agreement (TBT Agreement). More recently, this framework has been supplemented by the Cartagena Protocol on Biosafety (otherwise known as the Montreal Protocol), which came into force on September 11, 2003. A brief overview of the key points of these international agreements follows:

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<sup>1</sup> See HRH The Prince of Wales, “Questions About Genetically Modified Organisms” *The Daily Mail* (1 June 1999), online: The official website of HRH The Prince of Wales <[http://www.princeofwales.gov.uk/speeches/agriculture\\_01061999.html](http://www.princeofwales.gov.uk/speeches/agriculture_01061999.html)>.

## **(1) General Agreement on Tariffs and Trade (GATT)**

As the pre-eminent multilateral agreement governing international trade, the GATT provides an overall framework for the reduction of tariffs and other trade barriers, and provides for the elimination of discriminatory treatment in international commerce<sup>2</sup>. This is accomplished through specific measures that include general most-favoured-nation treatment, national treatment<sup>3</sup> with respect to international taxation and regulation,<sup>4</sup> and non-discriminatory administration of quantitative restrictions<sup>5</sup>.

While the primary purpose of the GATT is to promote international trade through the reduction of tariff and non-tariff trade barriers, Article XX sets out certain general exceptions that allow for the imposition of trade barriers in certain circumstances. Specifically, Article XX(b) provides as follows:

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 necessary to protect human, animal or plant life or health.

The scope of this provision as it impacts the regulation of GMOs is further clarified in the SPS Agreement.

## **(2) The Sanitary and Phytosanitary Measures Agreement (SPS Agreement)**

The SPS Agreement provides an overall framework of rules for the imposition of sanitary and phytosanitary measures, with the goal of minimizing the negative impact on trade that may result from the imposition of such measures. The provisions of the SPS Agreement apply to all sanitary and phytosanitary measures that may, directly or indirectly, affect international trade. Sanitary and phytosanitary measures are defined in Annex A of the SPS Agreement:

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<sup>2</sup> GATT, Preamble.

<sup>3</sup> GATT, Article I.

<sup>4</sup> GATT, Article III.

<sup>5</sup> GATT, Article XIII.

Any measure applied:

- (a) to protect animal or plant life or health within the territory of the Member from risks arising from the entry, establishment or spread of pests, diseases, disease-carrying organisms or disease-causing organisms;
- (b) to protect human or animal life or health within the territory of the Member from risks arising from additives, contaminants, toxins or disease-causing organisms in foods, beverages or feed-stuffs;
- (c) to protect human life or health within the territory of the Member from risks arising from diseases carried by animals, plants or products thereof, or from the entry, establishment or spread of pests; or
- (d) to prevent or limit other damage within the territory of the Member from the entry, establishment or spread of pests.

Article 2 of the SPS Agreement sets out the basic rights and obligations of member states and provides that all members have the right to impose sanitary or phytosanitary measures (hereinafter “measures”) necessary for the protection of human, animal or plant life or health so long as such measures: (i) are applied only to the extent necessary to protect human, animal or plant life or health; (ii) are based on scientific principles; and (iii) are not maintained without sufficient scientific evidence.<sup>6</sup> The requirement for scientific evidence is reiterated in the risk assessment provisions found in Article 5 of the SPS Agreement, which shall be discussed in greater detail towards the end of this section.

With respect to the general application of international trade principles, Article 2 states that any measures applied by a member state must not arbitrarily or unjustifiably discriminate, or be applied in a manner that constitutes a disguised restriction on international trade,<sup>7</sup> and concludes that all measures that conform to the SPS Agreement shall also be

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<sup>6</sup> SPS Agreement, Article 2 at para. 2.

<sup>7</sup> *Ibid.* at para. 3.

presumed to be in accordance with the GATT (specifically, Article XX(b) thereof).<sup>8</sup>

Further, to ensure a certain degree of harmonization amongst all member states, Article 3 of the SPS Agreement provides that measures applied by members must be based on international standards, guidelines, or recommendations where such exist,<sup>9</sup> and concludes that all such measures that conform to international standards, guidelines, or recommendations shall be deemed necessary to protect human, animal or plant life or health, and shall be presumed to be in accordance with the SPS Agreement and the GATT (specifically, Article XX(b) thereof).<sup>10</sup> However, Article 3 goes on to provide that member states may impose measures that go beyond international standards if scientific justification exists, or if a member state determines that such measures are appropriate in accordance with the risk assessment requirements of Article 5.<sup>11</sup>

The risk assessment requirements outlined in Article 5 of the SPS Agreement are formulated on the premise that all measures applied by member states shall be based on an assessment of risk to human, animal or plant life, or health, which takes into account:

- risk assessment techniques developed by relevant international organizations
- available scientific evidence
- relevant processes and production methods
- relevant inspection, sampling and testing methods
- prevalence of specific diseases or pests
- existence of pest- or disease-free areas
- relevant ecological and environmental conditions
- quarantine or other treatment.

In addition, relevant economic factors to be considered are:

- the potential damage in terms of loss of production or sales in the event of an entry
- the establishment or spread of a pest or disease
- the costs of control or eradication in the territory of the importing member state
- the relative cost-effectiveness of alternative approaches to limiting risks.<sup>12</sup>

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<sup>8</sup> *Ibid.* at para. 4.

<sup>9</sup> SPS Agreement, Article 3 at para. 1.

<sup>10</sup> *Ibid.* at para. 2.

<sup>11</sup> *Ibid.* at para. 3.

<sup>12</sup> SPS Agreement, Article 5 at paras. 1-3.

When conducting a risk assessment pursuant to Article 5, member states are required to take into account the objective of minimizing negative trade effects.<sup>13</sup> Therefore, the measures imposed cannot be more trade-restrictive than required to achieve the appropriate level of sanitary or phytosanitary protection, taking into account technical and economic feasibility.<sup>14</sup>

The leading WTO decision considering risk assessment in the context of the SPS Agreement is the decision of the WTO appellate body in “EC Measures Concerning Meat and Meat Products (Hormones).”<sup>15</sup> The WTO appellate body concluded that any risk assessment undertaken pursuant to Article 5: (i) must be scientific (as opposed to policy-driven); (ii) need not necessarily embody only the majority view of the relevant scientific community; and (iii) must address the specific product and risk in question.<sup>16</sup>

Notably, one short-term exception to the necessity for scientific evidence is found in Article 5, paragraph 7 of the SPS Agreement (the precautionary principle). It allows for the temporary imposition of measures without sufficient scientific evidence on the basis of available pertinent information. Factors to be considered when seeking to apply this exception include information from relevant international organizations and measures applied by other member states. If the exception is relied upon, additional information must be sought in order to conduct a more objective assessment of risk, and the member state relying upon the exception must review the measures against this risk assessment within a reasonable period of time.

### **(3) The Technical Barriers to Trade Agreement (TBT Agreement)**

The Preamble of the TBT Agreement sets out the desire of WTO members that “...technical regulations and standards...do not create unnecessary obstacles to trade,”<sup>17</sup> and recognizes that:

No country should be prevented from taking measures to ensure the quality of its exports, or for the protection of human, animal or plant life or health, of the environment, or for the prevention of deceptive practices, at the levels it considers appropriate, subject to the requirement that they are not applied in a manner which would constitute a

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<sup>13</sup> *Ibid.* at para. 4.

<sup>14</sup> *Ibid.* at para. 6.

<sup>15</sup> *EC Measures Concerning Meat and Meat Products (Hormones)* (1998), WTO Doc. WT/DS26/AB/R and WT/DS48/AB/R (Appellate Body Report).

<sup>16</sup> *Ibid.* at paras. 181, 194, & 200.

<sup>17</sup> TBT Agreement, Preamble.

means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail or a disguised restriction on international trade...<sup>18</sup>

The TBT Agreement specifically provides that it does not apply to sanitary or phytosanitary measures. Other than their respective applications, the primary difference between the TBT Agreement and the SPS Agreement is that the TBT Agreement provides for the adoption of technical barriers based on “legitimate objectives,” whereas the SPS Agreement does not.<sup>19</sup>

Although the TBT Agreement accords a degree of deference to the domestic policy objectives that its members wish to pursue, it does show less deference to the *means* by which members choose to implement their domestic policy objectives.<sup>20</sup> Therefore, members must advance the objectives of their technical regulations in a manner that would be considered “legitimate.” In the WTO’s *Sardines* decision,<sup>21</sup> the objectives of the EC’s Regulation prohibiting the use of the term “Peruvian sardines” on tins containing sardine-like fish caught off the Peruvian coast were considered legitimate. In that case, the three legitimate objectives pursued by the EC Regulation were market transparency, consumer protection, and fair competition.<sup>22</sup>

#### **(4) Cartagena Protocol on Biosafety (the Protocol)**

Generally, the Protocol is designed to ensure that “the development, handling, transport, use, transfer and release of any living modified organisms are undertaken in a manner that prevents or reduces the risks to biological diversity, taking also into account risks to human health.”<sup>23</sup> It is applicable only to living modified organisms (LMOs) and not to products derived therefrom.

Article 18 of the Protocol provides certain labeling and traceability requirements and the documentation required for (i) LMOs intended for direct use as food, feed, or for processing; (ii) LMOs intended for contained use; (iii) LMOs intended for intentional introduction into the environment of the importing party, and any other LMOs falling within the

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<sup>18</sup> *Ibid.*

<sup>19</sup> TBT Agreement at para. 2.2.

<sup>20</sup> See *European Communities - Trade Description of Sardines* (2002) WTO Doc. WT/DS231/R at para. 7.120 (Panel Report).

<sup>21</sup> *European Communities - Trade Description of Sardines* (2002) WTO Doc. WT/DS231/R (Panel Report).

<sup>22</sup> *Ibid.* at para. 7.123.

<sup>23</sup> Cartagena Protocol on Biosafety to the Convention on Biological Diversity, Article 2 at para. 2 [hereinafter “Cartagena Protocol”].

scope of the Protocol.

An Advanced Informed Agreement Procedure (set out in Articles 7, 8, 9, 10, and 12 of the Protocol) applies to the first intentional transboundary movement of an LMO for intentional introduction into the environment of the importing party. A separate notification and decision procedure (set out in Article 11 of the Protocol) applies to domestic use, including placing on the market an LMO that may be subject to transboundary movement for direct use as food, feed, or for processing. Although the notification and decision-making procedures to be followed for each use are different, both require that a risk assessment be undertaken.

Articles 15 and 16 and Annex III of the Protocol provide the principles to be followed for risk assessment and risk management. At a minimum, risk assessment is to be based on the information required to be provided by the exporting party and other scientific evidence available. Such risk assessment is to be conducted to identify and evaluate the potential negative effects of living modified organisms on the conservation and sustainable use of biological diversity, taking into account risks to human health.<sup>24</sup>

Similar to the precautionary principle found in the SPS Agreement, Articles 10.6 and 11.8 of the Protocol allow an importing party in certain circumstances to make a decision with regard to an LMO even without scientific certainty:

Lack of scientific certainty due to insufficient relevant scientific information and knowledge regarding the extent of the potential adverse effects of an LMO on the conservation and sustainable use of biological diversity in the Party of import, taking also into account risks of human health, shall not prevent that Party from taking a decision, as appropriate, with regard to the import of (i) the LMO in question, or (ii) that LMO intended for direct use as food or feed or for processing, in order to avoid or minimize such potential adverse effects.

However, unlike the precautionary principle found in the SPS Agreement, this exception to the general rule requiring scientific evidence is not a temporary measure. Perhaps recognizing the inevitable influence of consumer preference over the political sphere, the Protocol goes a step further than the SPS Agreement and specifically allows the parties to account for socio-economic factors in their decision-making process:

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<sup>24</sup> Cartagena Protocol, Article 15 at para. 1.

The Parties, in reaching a decision on import under this Protocol or under its domestic measures implementing the Protocol, may take into account, consistent with their international obligations, socio-economic considerations arising from the impact of [LMOs] on the conservation and sustainable use of biological diversity, especially with regard to the value of biological diversity to indigenous and local communities.<sup>25</sup>

The Protocol even goes so far as to provide for public awareness and participation in a nation's decision-making process with regard to LMOs. Parties to the Protocol are required to "promote and facilitate public awareness, education and participation concerning the safe transfer, handling and use of [LMOs] in relation to the conservation and sustainable use of biological diversity, taking also into account risks to human health" and to consult the public with regard to their decision-making process on LMOs.<sup>26</sup>

While it could be argued that the Protocol signifies too great a shift in favour of consumer preference at the expense of scientific evidence, the influence that the Protocol will exert is questionable. Notably, the United States is not a party to the Protocol. In addition, while the Protocol and the WTO regime are intended to be mutually supportive, it remains to be seen whether the two will clash in practice. The Preamble to the Protocol states that "this Protocol shall not be interpreted as applying a change in the right and obligations of a Party under any existing international agreements," but then goes on to provide that the foregoing "is not intended to subordinate this Protocol to other international agreements." Therefore, it is uncertain as to whether the Protocol or the WTO regime would apply in a situation of conflict.

## **(5) Trade-Related Aspects of Intellectual Property Rights (TRIPS)**

Found in Annex 1C to the GATT, it is questionable whether the TRIPS provisions apply to GMOs. However, Canadian courts recently had the opportunity to consider intellectual property rights as they apply to GMOs in the case of *Monsanto Canada Inc. v. Schmeiser*.<sup>27</sup> The case focused on the conflict between intellectual property rights (patentability) and the tort of nuisance and will be discussed further in this paper.

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<sup>25</sup> Cartagena Protocol, Article 26.

<sup>26</sup> Cartagena Protocol, Article 23.

<sup>27</sup> *Monsanto Canada Inc. v. Schmeiser* [2001] F.C.J. No. 436 (T.D.), as affirmed by [2002] F.C.J. No. 1209 (QL).



## CANADA

### (1) Regulatory Framework

The Canadian regulatory framework as applicable to GMOs is centered on:

- (i) “novel food,” including genetically modified foods;<sup>28</sup>
- (ii) “plants with novel traits,” including genetically modified plants;<sup>29</sup> and
- (iii) “livestock feed derived from plants with novel traits.”<sup>30</sup>

The regulatory process for approval of a genetically modified (GM) food is a seven to ten year course of action that is largely based on a scientific safety evaluation. It involves the following steps:

- (i) pre-submission consultation with Health Canada;
- (ii) pre-market notification;
- (iii) scientific safety evaluation;
- (iv) requests for additional information, if required;
- (v) summary report of findings from scientific safety evaluation;
- (vi) preparation of food rulings proposal (if there are no health risks associated with consumption of the GM food product in question);
- (vii) letter of no objection (if the GM food product receives approval); and
- (viii) decision document on the Health Canada website.<sup>31</sup>

With respect to labeling requirements - a primary concern for E.U. nations - labeling is mandatory in Canada only if there is a health or safety issue with a GM food that might be mitigated through labeling. In addition, the Canadian General Standards Board has been working to develop a draft Canadian standard for the voluntary labeling of GM foods to address those issues that do not involve health or safety.<sup>32</sup>

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<sup>28</sup> *Novel Foods*, Division 28 of the *Food and Drug Regulations*, C.R.C., c. 870 under *The Food and Drugs Act*, R.S. 1985, c. F-27.

<sup>29</sup> *Seeds Act*, R.S. 1985, c. S-8.

<sup>30</sup> *Feeds Act*, R.S. 1985, c. F-9.

<sup>31</sup> The Regulation of GM Food, online: Health Canada <<http://www.hcsc.gc.ca/english/protection/biotech/regulation.htm>>.

<sup>32</sup> *Ibid.*

## **(2) Recent Court Decisions**

### **(A) *Monsanto Canada Inc. v. Schmeiser.***

As previously mentioned, Canadian courts recently had the opportunity to consider the applicability of intellectual property rights to GMOs in the recent case of *Monsanto Canada Inc. v. Schmeiser*.

Percy Schmeiser was a Canadian farmer who grew conventional (non-genetically modified) canola. Schmeiser's land was bordered by farms that grew genetically modified canola (known as "Roundup Ready canola" due to its resistance to an herbicide present in Roundup). Roundup Ready canola was manufactured by Monsanto, who held a Canadian patent on the product. The patent mandated that every purchaser of Roundup Ready canola sign a Grower's Agreement and a Technology Use Agreement, which set out the terms and conditions under which a purchaser could use the patented seeds. The patent also provided that a purchaser of Roundup Ready canola was entitled to use the seeds for one-time planting and could only sell the seeds to a commercial purchaser authorized by Monsanto for consumption. The purchaser was not entitled to sell or give the seeds to anyone else, and could not save the seeds for replanting the following year.

Roundup Ready canola was detected on Schmeiser's land, and Monsanto sued both Schmeiser individually and Schmeiser's farm corporation for patent infringement. Monsanto argued that Schmeiser had purposely reproduced Monsanto's patented gene and cells without proper authorization. Schmeiser argued that the presence of Roundup Ready canola on his property had resulted from genetic drift and/or cross-pollination from neighbouring lands.

The Federal Court of Canada (Trial Division) stated that "[patent] infringement is any act which interferes with the full enjoyment of the monopoly rights of the patentee" and that "intention is immaterial, for 'infringement occurs when the essence of an invention is taken', regardless of the intention of the infringer."<sup>33</sup> Therefore, for the purposes of determining whether Monsanto's patent had been infringed, it was held to be immaterial as to how the Roundup Ready canola came to be on Schmeiser's land (a strict liability test, of sorts).

Justice McKay concluded that even if Roundup Ready canola was accidentally spread to Schmeiser's land in 1996/97 (as Schmeiser contended), Schmeiser continued in 1998 to cultivate Roundup Ready canola from seed saved from his 1997 crop, which Schmeiser knew or

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<sup>33</sup> *Monsanto Canada Inc. v. Schmeiser*, [2001] F.C.J. No. 436 at para. 115 (QL).

ought to have known was Roundup resistant. The Court also pointed out that two other farmers who had suspected and/or known that their crops contained Roundup Ready canola had called Monsanto, who came and removed the undesired Roundup Ready plants from the crops at Monsanto's expense. In other words, even if the spread of Roundup Ready canola onto Schmeiser's land had been accidental, Schmeiser had done nothing to alleviate the situation and was using Monsanto's patented materials without paying for a license. Therefore, the Court ruled in favour of Monsanto and held that Schmeiser had infringed Monsanto's patent. Justice McKay stated:

Thus a farmer whose field contains seed or plants originating from seed spilled into them, or blown as seed, in swaths from a neighbour's land or even growing from germination by pollen carried into his field from elsewhere by insects, birds, or by the wind, may own the seed or plants on his land even if he did not set out to plant them. He does not, however, own the right to the use of the patented gene, or of the seed or plant containing the patented gene or cell.<sup>34</sup>

and concluded that:

While I acknowledge that the seed or plant containing the plaintiffs' patented gene and cell may be owned in a legal sense by the farmer who has acquired the seed or plant, that "owner's" interest in the seed or plant is subject to the plaintiffs' patent rights, including the exclusive right to use or sell its gene or cell, and they alone may license others to use the invention.<sup>35</sup>

This decision was upheld by the Federal Court of Appeal, and on June 9, 2003, leave to appeal to the Supreme Court of Canada was filed.<sup>36</sup> The Supreme Court of Canada upheld the decision of the Federal Court of Appeal with a slim 5-4 majority, but overruled the remedy of an accounting for profits by Schmeiser. Notably, as a related issue, Monsanto has recently elected not to pursue its development of Roundup Ready wheat in the face of opposition by the Canadian Wheat Board.

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<sup>34</sup> *Ibid.* at para. 92.

<sup>35</sup> *Ibid.* at para. 91.

<sup>36</sup> *Monsanto Canada Inc. v. Schmeiser* [2005] 1 S.C.R. 902.

**(B) *Hoffman v. Monsanto Canada Inc. and Aventis Cropscience Canada Holdings Inc.***

While the *Schmeiser* decision focused primarily on patent rights, the lawsuit represented by the statement of claim filed in the matter of *Hoffman v. Monsanto Canada Inc. and Aventis Cropscience Canada Holdings Inc.*<sup>37</sup> is an attempt by producers to shift focus to the tort of nuisance, and the effect that genetic drift and/or cross-pollination has on those who produce non-genetically modified crops.

Members of the Saskatchewan Organic Directorate brought a class action lawsuit against Monsanto and Aventis on behalf of all organic grain farmers in Saskatchewan, alleging that the organic farmers have lost the ability to market organic canola due to the contamination of organic canola crops caused by adventitious cross-pollination from genetically modified canola. The action further alleges that the defendants' ability to conduct field trials of genetically modified wheat will have a similar effect on organic wheat crops and therefore, the market. The producers seek an injunction restraining the release of genetically modified wheat into the Saskatchewan environment.

The plaintiffs rely in part on *The Environmental Management and Protection Act*<sup>38</sup> (alleging that the defendants' genetic modifications fall under the definition of "pollutant") and *The Environmental Assessment Act*<sup>39</sup> (alleging that the defendants were required to conduct an environmental impact assessment). In addition to the aforementioned injunction, the plaintiffs also seek damages in tort and statutory damages. Currently, the parties are still undergoing the certification process for the class action.<sup>40</sup>

## **EUROPEAN COMMUNITY (EC)**

**O**N SEPTEMBER 22, 2003, THE European Parliament and the European Council passed two regulations dealing with GMOs:

- (i) Regulation 1829/2003 (on genetically modified food and feed); and
- (ii) Regulation 1830/2003 (on the traceability and labeling

<sup>37</sup> *Hoffman v. Monsanto Canada Inc.* [2002], S.J. No.281 (QL).

<sup>38</sup> *The Environmental Management and Protection Act*, 2002, S.S. 2002, c. E-10.21.

<sup>39</sup> *The Environmental Assessment Act*, S.S. 1979-80, c. E-10.1.

<sup>40</sup> Since this paper has been written, the parties have received certification to proceed with the class action, which will be heard in the Saskatchewan Court of Queen's Bench on September 14 and 15, 2004.

of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms).

In brief, these regulations provide for:

- (i) the import and placement on the European market of GMOs, provided that authorization is first obtained (in accordance with the regulations, including the labeling and traceability requirements thereunder);
- (ii) scientific risk assessment and cost/benefit analysis;
- (iii) the establishment of an independent central repository whereby the public can access non-confidential information with regard to genetically modified food and feed; and
- (iv) exemption from labeling and traceability requirements for trace amounts of GMOs (using such trace amount thresholds as determined by other EC directives, regulations and legislation) as long as such trace amounts are adventitious or technically unavoidable.

It is questionable, however, whether a scientific basis for such stringent labeling requirements exists, or whether the labeling requirements are merely a response to consumer preference and public anxiety over food safety. In support for such labeling requirements, the European Commission has explicitly stated:

In the European Community, concerns and demands of citizens and interest groups are part of the political, democratic process...The fact that the European Parliament and the vast majority of member States have endorsed the proposed labelling requirements with the objective of ensuring transparency in the market place and facilitating consumer choice indicates that there is wide-spread democratic support of meeting the consumer demands in the European Community.<sup>41</sup>

Further, the question arises as to whether traceability is implemented

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<sup>41</sup> WTO, *Committee on Sanitary and Phytosanitary Measures*, WTO Doc. G/SPS/GEN/405 at 9.

only in furtherance of labeling requirements, or as a beneficial practice in its own right. As with labeling, traceability is limited to genetically modified food and feed - if the concern truly is consumer safety, why not extend the application of labeling and traceability requirements to hybrid plants or, given the recent BSE crisis, beef products? WTO Committee documents indicate that:

In its presentation, the European Communities recognize that, according to its risk assessment, genetically modified plants and products obtained therefrom authorized for marketing in the European Communities do not represent a higher risk than their conventional counterparts, in other words they have the same "level of safety."<sup>42</sup>

Therefore, in light of the recognition by the EC itself that no scientific basis exists, what is the true justification for setting up a different regime for the approval, labeling, and traceability of GMOs in comparison with their conventional counterparts? With regard to both labeling and traceability, the principle of non-discrimination should apply (i.e. both GMOs and conventional products should be treated equally).

The United States, Canada, and Argentina initiated a challenge against the E.U.'s GMO approval system on May 13, 2003,<sup>43</sup> requesting consultations under the WTO's dispute settlement mechanism.<sup>44</sup> The dispute is over the EC's "de facto" moratorium on the approval and marketing of biotech products.<sup>45</sup> The United States, Canada, and Argentina allege that the E.U.'s ban has no scientific basis and has unnecessarily restricted international trade in biotech crops.<sup>46</sup> The E.U.'s response to the complainants is that their "actions in taking all necessary steps demanded by its citizens to protect against risks to human health and the environment were prudent and...were reasonable."<sup>47</sup>

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<sup>42</sup> *Ibid.* at 5.

<sup>43</sup> Argentina actually followed Canada's and the United States' lead and formally requested consultations the following day on May 14, 2003.

<sup>44</sup> *European Communities - Measures Affecting the Approval and Marketing of Biotech Products*, WTO Doc. DS/291, DS/292, DS/293 [hereinafter "*European Communities*"].

<sup>45</sup> The E.U. has had an approval system in place since 1990.

<sup>46</sup> *European Communities*, *supra* note 44 at paras. 6 & 9.

<sup>47</sup> *Ibid.* at para. 9.

## CONSUMER PREFERENCE

**A**RGUABLY, EC DEVELOPMENTS WITH regard to labeling and traceability are based more on consumer preference than on independent scientific analysis. The social psychology of consumer preference has shown that people are generally bad risk assessors and therefore, international law should not be based on consumer preference but on independent scientific risk assessment and cost/benefit analyses. In addition, when independent scientific assessment and cost/benefit analyses are taken out of the equation, the question must then be asked as to whether barriers such as labeling and traceability are simply discriminatory measures, and therefore contrary to international law.

Practical reality dictates, however, that people are generally averse to a challenge to their common sense (even if such a challenge is backed by scientific data) and thus, no politically savvy government will completely ignore widely held consumer beliefs. For instance, in the face of public pressure, the EC will not likely abandon labeling and traceability requirements just because the WTO may consider them illegal trade barriers. As a result, either the parties involved will be thrown into lengthy and costly trade wars, or the EC may choose instead to completely ban the import and use of GMOs. Further, any move away from transparency may be viewed as a conspiracy or cover-up by an already cynical public when it comes to the ability of government to effectively manage the safety of the food supply.<sup>48</sup>

Therefore, despite the fact that bowing to consumer preference may not make good law, it is inevitable that consumer preference will be a factor taken into consideration by governments when making decisions about GMOs. However, rather than bowing blindly to consumer preference, governments must take a constrained approach to dealing with the electorate. With respect to GMOs, government must:

- (i) not contribute to consumer anxieties by propagating false or misleading information;
- (ii) not prevent producer countries and companies from freely getting their message across to the public that GMOs are safe;
- (iii) actively conduct or sponsor cost/benefit analyses (which must include a credible risk assessment) and, if the product is deemed safe yet is treated differently

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<sup>48</sup> BSE, SARS, and hoof & mouth disease being prime examples.

from other products in light of consumer concern, must make a reasonable effort to inform the public about the cost/benefit analyses and scientific studies which have been undertaken. Ideally, such cost/benefit analyses should be conducted by independent, arm's length organizations;

- (iv) take steps to ensure that consumer concern is genuinely based on health and safety concerns (not xenophobia or discrimination based on country of origin, governmental policies, ethnic composition, etc.). For instance, in human rights law, consumer preference based on racial attitudes is not given any deference;
- (v) review consumer preference limitations periodically (i.e. every three years).

With regard to whether the international agreements previously referenced (the SPS Agreement, the TBT Agreement, and the Protocol) permit consideration of consumer preference, it should be noted that the SPS Agreement does not include either a general reference to "legitimate objectives" or a specific reference to consumer preference as a consideration. The TBT Agreement does allow for "legitimate objectives" to be taken into account, but does not expressly reference consumer preference, and the Protocol makes consideration of consumer preference mandatory (by permitting socio-economic considerations).

In the long run, cost-benefit analyses should stress the extent to which GMOs support the values held by those concerned with the environment and human safety. For instance, GMOs may permit the reduced use of pesticides, result in plants that better resist soil erosion, and result in plants, food and/or other organisms with increased nutritional or medicinal benefit. In essence, ironically, GMOs may best serve to meet the ends sought by their opponents and critics.