

## THE LABELING OF GMO PRODUCTS PURSUANT TO INTERNATIONAL TRADE RULES

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On the way to the N.Y.U. Conference from Geneva, this author saw a cartoon in one of the Swiss newspapers which, translated from the French, offered the punch line, "Genetic engineering is causing increased resistance in two species: farmers and consumers." The point is particularly apt with respect to labeling, because labeling influences the production practices of farmers and the consumption decisions of consumers. These considerations, coupled with the underlying debate between scientific justification and protectionism, are at the heart of the controversy surrounding the labeling of products made with genetically modified organisms (GMOs).

This article offers some introductory comments on the labeling of GMO products, including comments related to the legality of labeling pursuant to the Marrakesh Agreement Establishing the World Trade Organization (WTO Agreement).<sup>1</sup> Adapted from my conference presentation, the article is not intended as a comprehensive legal analysis. Other conference participants touched upon labeling in their presentations; this article weaves together their points and addresses some of the issues that were not mentioned, including the Agreement on Technical Barriers to Trade<sup>2</sup> and the Agreement on the Application of Sanitary and

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<sup>1</sup> See Marrakesh Agreement Establishing the World Trade Organization, Apr. 15, 1994, GATT SECRETARIAT, RESULTS OF THE URUGUAY ROUND OF MULTILATERAL TRADE NEGOTIATIONS: THE LEGAL TEXTS (1994), at 6; 33 I.L.M. 1144 [hereinafter WTO Agreement].

<sup>2</sup> See Agreement on Technical Barriers to Trade, Apr. 15, 1994, Annex 1A to WTO Agreement, *supra* note 1, at 138; 1994 WL 761483 [hereinafter TBT Agreement].

Phytosanitary Measures,<sup>3</sup> each of which is contained in the WTO Agreement.

## I

### POLICY CONTEXT OF THE LABELING CONTROVERSY

It is useful to begin a discussion of GMO labeling by noting some of the more frequently invoked policy grounds cited for and against labeling. This approach will make it easier to understand the implications of the WTO Agreement, as well as WTO Appellate Body decisions interpreting this agreement, for GMO labeling.

#### A. *Reasons for GMO Labeling*

The most important argument in support of GMO labeling, one that repeatedly receives the most attention, is the “consumer’s right to know.” Simply put, many consumers feel that they have a right to know what they are eating and how the products they eat are produced. This point is difficult to dispute. For many consumers, knowing what they eat and being in a position to evaluate consumption risks has profound importance. Concealing production information is offensive to these consumers. This being said, detailed information about agricultural production and production processes is not readily available to consumers. The food chain has become “industrial in nature,” and we are placing ever more confidence in government officials to make the correct agricultural policy decisions.

Labeling proponents also cite health considerations—in particular, protecting people from known allergens—to support GMO labeling. It goes without saying that susceptible consumers should be informed if a given product contains genetic material that might produce an allergic reaction. Labeling is a reasonable means of accomplishing this goal. Questions arise, however, when the goal of labeling is not protection against known health risks but protection against unknown risks, including environmental risks. With the exception of risks associated with allergens transplanted from one species into another, no convincing case has been made that GMO products pose consumer health risks. This does not mean that a precautionary ap-

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<sup>3</sup> See Agreement on the Application of Sanitary and Phytosanitary Measures, Apr. 15, 1994, Annex 1A to WTO Agreement, *supra* note 1, at 69; 1994 WL 761483 [hereinafter SPS Agreement].

proach should not be taken; the question is only where to set the limits of precaution. Establishing these limits is one of the most controversial issues involved in GMO labeling.

There are several other rationales that are sometimes cited by proponents of GMO labeling. For example, some proponents argue that GMO labeling is environmentally beneficial because it makes it easier for consumers to base consumption decisions on environmental factors associated with particular products. Environmental issues are of profound concern to many consumers, and these concerns, whether GMO-related or not, must not be minimized. It should be noted, however, that even if the alleged dangers of GMO products are eventually proven, GMO labeling itself is not likely to eliminate these risks or allay environmental concerns associated with GMO products. Informing consumer decision-making through labeling is not an effective substitute for regulatory schemes, restrictions, and prohibitions designed to address underlying health and environmental concerns.

Another secondary rationale cited in support of GMO labeling is its ability to influence foreign and domestic production practices. While attractive to environmentalists and to domestic producers faced with competition from foreign GMO products, such motives raise concerns among exporters who fear that labeling is a step toward, or a form of, protectionism. This argument raises the question of whether labeling should be used to stigmatize products, absent compelling evidence about the dangers of these products. It also raises questions about the role of the WTO-based trading system and whether this system provides the right framework for addressing such important policy issues.

Lastly, there are assorted moral, ethical, and religious concerns, as well as concerns regarding the impact of genetically modified foods on developing countries, that frequently arise when GMO labeling is discussed. Arguments based on these issues are invariably passionate, and it is often difficult to distinguish between an individual's legitimate desire to conform to his or her own moral, ethical, and religious beliefs, and the less legitimate desire of these same individuals to impose such beliefs on others. These concerns are complicated further by the fact that labels can stigmatize, perhaps not always rationally, and may lead consumers to reject products despite the absence of a compelling scientific reason for doing so. Many of the moral and ethical arguments are of profound importance to labeling proponents, but

they are considered subsidiary arguments by many other people, particularly those influenced by scientific considerations.

### B. *Arguments Against GMO Labeling*

There are several arguments cited in opposition to GMO labeling, almost all of which have an underlying business or trade policy rationale. First of all, certain business interests, particularly those in the agriculture and processed food industries, fear that labeling will increase consumer suspicion, thereby making GMO products less attractive, or even stigmatizing them. Some go so far as to view labeling as a means of discouraging the development of a new and promising technology. In the extreme, labeling proponents are sometimes portrayed as the new Luddites.

How well founded are these fears? One speaker at this conference mentioned the sharp decline in the sale of a particular brand of tomato paste in the United Kingdom, when it was revealed that the product was made from GMO tomatoes.<sup>4</sup> Some businessmen fear that GMO labeling could have a similar effect in other product sectors. Given the absence of compelling evidence demonstrating the dangers of GMO products, the case for the potential abuse of labeling schemes has some appeal.

It would be wrong, however, to assume that all agricultural or life-science businesses oppose labeling. Some companies have taken a positive view of GMO labeling, as illustrated by the representative of one company who spoke at the conference.<sup>5</sup> But this company may be an exception to the norm, at least for now. A whole new industry has developed around ways to detect products made from or with GMOs.

A second argument made by labeling opponents involves the expenses, both direct and indirect, of GMO labeling and the cost implications for non-GMO products that may result from the labeling of highly successful GMO products such as soy. Labeling a GMO product implies segregating GMO and non-GMO products throughout the production process, and indeed, in some cases, throughout much of their life-cycles. This creates difficulties with certain fungible products, such as soy or corn, where it may be costly to segregate GMO crops and byproducts. Such segregation could have an impact on economies of scale. The

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<sup>4</sup> See Julian Kinderlerer, Address at the N.Y.U. School of Law Colloquium on the Risks and Regulation of GMO Food Products (Oct. 2, 1999).

<sup>5</sup> See Willy De Greef, *Regulatory Conflicts and Trade*, this volume at 579.

end result could be higher food prices, for both GMO and non-GMO food products.

A third argument against labeling relates to the precautionary principle, often cited by labeling proponents as a justification for labeling. Difficult questions arise as to the extent to which we must be "cautious." Is the burden of proof so high that no GMO product will or should escape labeling? Can civil society's burden of proof ever be met, or is precaution a pretext for other social goals or protectionism?

Lastly, many trade specialists and business leaders oppose GMO labeling because of its perceived implications for the international trading system. The fear that GMO labeling could function as a disguised restriction on international trade is a subject that has received frequent discussion among both trade specialists and the business community. In addition, many WTO members object to the use of labeling to influence foreign production processes, technical regulations, and standards.

## II

### GMO LABELING AND THE WTO AGREEMENT

There has not been a full-fledged WTO dispute on the subject of GMO labeling, so uncertainties remain concerning the treatment of GMO labeling pursuant to the WTO Agreement. Some of these uncertainties, and certain misperceptions of the relationship between the WTO and GMO labeling evident during the conference, are addressed below.

Pursuant to the WTO Agreement, every WTO member maintains a large degree of autonomy with respect to the application of its domestic trade policy. A potential conflict may arise between GMO labeling and the WTO Agreement with respect to the application of domestic GMO labeling requirements to imported products. While a member is certainly free to outlaw the domestic production of GMO products or to require domestic manufacturers to label GMO products for domestic sale, imposing such requirements on imported GMO products may give rise to a trade issue under the WTO Agreement.

One reason for the tension between domestic policy interests related to biotechnology and international economic commitments is that the WTO Agreement was not drafted with the full complexity of biotechnology issues in mind. If WTO members do not develop new rules for treating biotechnology contro-

versies, existing WTO rules as interpreted by panels and the WTO Appellate Body will be applied. Panel and Appellate Body interpretations may not always produce a desirable solution. This problem illustrates the need to understand existing trade rules in order to speak intelligently about GMO labeling and the applicable trade policy options.

In the event of a conflict among WTO rules, the WTO Agreement establishes a hierarchy.<sup>6</sup> The Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) and the Agreement on Technical Barriers to Trade (TBT Agreement) have precedence over the 1947 General Agreement on Tariffs and Trade (GATT).<sup>7</sup> Because of this hierarchy, and because of the sophisticated nature of the SPS and TBT Agreements, the legality of GMO labeling schemes should be analyzed first from the perspective of these two agreements. Some of the key issues arising under the SPS and TBT Agreements are set out below.

A. *The Agreement on the Application of Sanitary and Phytosanitary Measures*

A threshold issue is whether the SPS Agreement or the TBT Agreement should be applied to GMO labeling. This is an important question because, unlike the TBT Agreement, the SPS Agreement does not contain most-favored-nation and national treatment provisions and therefore permits certain forms of trade discrimination.<sup>8</sup>

The SPS Agreement is aimed at ensuring that “the effects on trade of government actions to ensure the safety of food and the protection of animal and plant health are kept to a minimum.”<sup>9</sup>

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<sup>6</sup> See, e.g., WTO Agreement, art. XVI(3), *supra* note 1, at 17 (providing that “[i]n event of a conflict between a provision of this Agreement and a provision of any of the Multilateral Trade Agreements, the provision of this Agreement shall prevail to the extent of the conflict”); see also Frieder Roessler, “The Agreement Establishing the World Trade Organization,” in *THE URUGUAY ROUND RESULTS: A EUROPEAN LAWYERS’ PERSPECTIVE, PROCEEDINGS OF AN INTERNATIONAL CONFERENCE HELD AT THE COLLEGE OF EUROPE, BRUGES 70-71* (Jacques Bourgeois et al. eds., 1995).

<sup>7</sup> See General Agreement on Tariffs and Trade, Oct. 30, 1947, 61 Stat. A-11, T.I.A.S. 1700, 55 U.N.T.S. 194, RESULTS: LEGAL TEXTS, *supra* note 1, Appendix, at 485-558 [hereinafter GATT].

<sup>8</sup> See discussion of the TBT Agreement *infra* Part II.B.

<sup>9</sup> WTO SECRETARIAT, *GUIDE TO THE URUGUAY ROUND AGREEMENTS* 62 (1999).

Article 1.5 of the TBT Agreement contains a very important carve-out: by its reference to Annex A of the SPS Agreement, Article 1.5 makes the SPS Agreement, not the TBT Agreement, applicable to labeling requirements directly related to food safety.<sup>10</sup> Where human, animal, or plant life or health are jeopardized by pests, diseases, disease-carrying organisms, additives, contaminants, or toxins, it is also the SPS Agreement and not the TBT Agreement which applies. Unfortunately, the terms “additives,” “contaminants,” and “toxins” are not included among the definitions provided by the SPS Agreement.<sup>11</sup> If the WTO Appellate Body is asked to interpret this language, it is likely that it will either look for an internationally accepted meaning<sup>12</sup> or turn to a respected dictionary.<sup>13</sup>

The SPS Agreement relies heavily on scientific criteria. The phrase “scientific justification” is used in Article 3.3 and in a note to that provision.<sup>14</sup> Article 5.7 also speaks to the sufficiency of scientific evidence.<sup>15</sup> The Appellate Body, in its decisions in the *Salmon* and *Hormones* cases,<sup>16</sup> has made clear that such “scientific” criteria do not include merely theoretical risks. If a risk is to serve as the basis for a restriction on trade, it must be ascer-

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<sup>10</sup> See TBT Agreement art. 1.5.

<sup>11</sup> See SPS Agreement Annex A.

<sup>12</sup> This alternative would be in the spirit of art. 3 and Annex A, para. 3, of the SPS Agreement.

<sup>13</sup> For example, the following GATT Dispute Panel Reports indicate that the Appellate Body had recourse to THE CONCISE OXFORD DICTIONARY OF CURRENT ENGLISH, in *Australia—Measures Affecting Importation of Salmon*, WT/DS18/AB/R (Oct. 20, 1998), 8 BERNAN'S ANNOT. REP. 359, 390 n.71; and in *India—Quantitative Restrictions on Imports of Agricultural, Textile and Industrial Products*, WT/DS90/AB/R (Aug. 23, 1999), 13 BERNAN'S ANNOT. REP. 95, 117 n.57; to THE NEW SHORTER OXFORD ENGLISH DICTIONARY ON HISTORICAL PRINCIPLES, in *European Communities—Measures Concerning Meat and Meat Products (Hormones)*, WT/DS26/AB/R, WT/DS48/AB/R (Jan. 16, 1998), 4 BERNAN'S ANNOT. REP. 275, 332 n.164; and in *United States—Standards for Reformulated and Conventional Gasoline*, WT/DS2/AB/R (Apr. 20, 1996), 1 BERNAN'S ANNOT. REP. 47, 59 n.40; and to WEBSTER'S THIRD INTERNATIONAL DICTIONARY and BLACK'S LAW DICTIONARY, in *Korea—Definitive Safeguard Measure on Imports of Certain Dairy Products*, AB-1999-8, WT/DS98/AB/R (Dec. 14, 1999), n.47; and in *Argentina—Safeguard Measures on Imports of Footwear*, AB-1997-7, WT/DS121/AB/R (Dec. 14, 1999), n.80. Recent decisions, including the last two above, are available on the WTO's website: <[www.wto.org](http://www.wto.org)>.

<sup>14</sup> See SPS Agreement art. 3.3.

<sup>15</sup> See *id.*

<sup>16</sup> See generally *Australia—Salmon*, and *European Communities—Hormones*, *supra* note 13.

tainable. These decisions have implications for the precautionary principle in that the precautionary threshold is set higher than some anti-GMO advocates would prefer.

If the requirements of the SPS Agreement are satisfied, the requirements of GATT Article XX(b), as well as its chapeau, are presumed to be met.<sup>17</sup> GATT Article XX(b) contains an exception to the substantive GATT provisions for measures “necessary” to protect human, animal, or plant life or health.<sup>18</sup> This exception, also found in Article 2.4 of the SPS Agreement, is important to consider, because no GATT/WTO panel has ever found that the requirements of Article XX(b) were met.

The “Recitals” (introductory language before Article 1) and Article 3 of the SPS Agreement evidence the emphasis that the WTO Members have placed on the international harmonization of SPS standards, guidelines, and recommendations.<sup>19</sup> With respect to the harmonization requirements of the SPS Agreement, the work of the Codex Alimentarius Commission is particularly important.<sup>20</sup> Pursuant to SPS Annex A, paragraph 3, the standards, guidelines, and recommendations established by Codex Alimentarius relating to food additives, veterinary drugs, pesticide residues, and contaminants are considered to be international standards, guidelines, and recommendations for food safety, for SPS purposes.<sup>21</sup> SPS measures which conform to such international standards, guidelines, or recommendations are deemed in SPS Article 3.2 to be “necessary”<sup>22</sup> to protect human, animal, or plant life or health, and are presumed to be consistent with both the SPS Agreement and GATT 1994.<sup>23</sup>

During the last week of April 1999, the 27<sup>th</sup> Session of the Codex Committee on Food Labeling was held in Ottawa, Canada. The Committee on Food Labeling is responsible for determining whether to require the systematic labeling of foods containing or obtained from biotechnology (including GMOs). During the 27<sup>th</sup> Session, the United States, Canada, and Argen-

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<sup>17</sup> See SPS Agreement art. 2.4. See also *id.* Preamble, n.1. (referring to GATT, art. XX(b) and its chapeau).

<sup>18</sup> See GATT art. XX(b).

<sup>19</sup> See SPS Agreement art. 3.

<sup>20</sup> See Theofanis Christoforou, *Settlement of Science-Based Trade Disputes in the WTO—A Critical Review of the Developing Case Law in the Face of Scientific Uncertainty*, this volume at 622.

<sup>21</sup> See SPS Agreement Annex 3, para. 3.

<sup>22</sup> “Necessary” is a term of art in the WTO. See TBT Agreement, art. 2.2.

<sup>23</sup> See SPS Agreement art. 3.2.



tina opposed a “Draft Recommendation for the Labeling of Foods Obtained through Biotechnology.” As a result, the Proposed Draft Recommendation was sent back to “Step 3” for re-drafting by a working group to be chaired by Canada.<sup>24</sup>

### B. *The Agreement on Technical Barriers to Trade*

GMO labeling requirements not based on food safety or other SPS grounds are, in most cases, governed by the Agreement on Technical Barriers to Trade. The TBT Agreement explicitly covers mandatory and voluntary labeling requirements not falling within the SPS Agreement.<sup>25</sup> When, for example, the European Community provided notice of its draft of Regulation 1139/98, setting forth rules for the labeling of foods and food ingredients produced from genetically modified soy and corn, it filed its notice with the WTO’s TBT Committee.<sup>26</sup>

The TBT Agreement is tightly written and rather rigid in nature. As a result, WTO panels and the WTO Appellate Body have avoided applying it until now. The *Asbestos* dispute between Canada and the European Union is expected to provide the first major test of this Agreement.<sup>27</sup>

Two of the agreement’s most important provisions, Article 2.1 and Article 2.2, govern “technical regulations,” including cer-

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<sup>24</sup> The E.U., Norway, and several consumer groups who serve as observers supported some form of mandatory labeling standard. See Codex Alimentarius Commission, Joint FAO/WHO Foods Standard Programme, ALINORM 99/22A, containing Circular Letter CL 1999/10-FL (May 1999), the Report of the 27th Session of the Codex Committee on Food Labeling, “Summary and Conclusion,” at iv.

<sup>25</sup> See TBT Agreement, Annex 1, arts. 1-2.

<sup>26</sup> See *Notification*, WTO, G/TBT/Notif.97.766 (Dec. 12, 1997), containing the notification of the “Draft Commission Regulation Concerning the Compulsory Indication on the Labelling of Certain Foodstuffs Produced from Genetically Modified Organisms of Particulars Other Than Those Provided for in Directive 79/112/EEC.” This regulation implemented general rules laid down by Commission Regulation 1813/97 of Sept. 19, 1997, which mentions several of the rationales for GMO labeling discussed in the first section of this presentation. See Commission Regulation 1813/97, 1997 O.J. (L 257) 7. It refers to labeling “in order to ensure proper information for the final consumer” (recitals 7 and 8 make reference to EC Regulation No. 258/97), health implications (art. 2(b)), and ethical concerns (art. 2(c)). Cf. Commission Regulation 1139/98, recitals 5 and 6, 1998 O.J. (L159) 4.

<sup>27</sup> See European Communities—Measures Affecting Asbestos and Products Containing Asbestos, Request for Consultations by Canada, WT/DS135/1, G/SPS/GEN/72, G/TBT/D/15 (June 3, 1998), available at <<http://www.wto.org>>.

tain mandatory GMO labeling measures.<sup>28</sup> Article 2.1 provides that “products imported from the territory of any Member shall be accorded treatment no less favourable than that accorded to like products of national origin and to like products originating in any other country.”<sup>29</sup> These requirements, known collectively as the “non-discrimination requirement,” are applicable to “like products.” Non-discrimination means that among WTO members, domestic and imported “like products” must be treated equally with respect to the application of trade rules, such as internal regulations, taxes, and charges. Certain forms of discrimination between two products that are not like products might be permissible.

What constitutes a “like product” within the GATT/WTO system has given rise to considerable controversy. The phrase “like products” is a term of art. The WTO Appellate Body’s ruling in *Alcoholic Beverages*<sup>30</sup> provides an example of the prevailing thinking on this subject. In this ruling, the Appellate Body found that the determination concerning whether two products are “like” must be made on a case-by-case basis.<sup>31</sup> The decision affirmed the approach adopted in the 1970 *Border Tax Adjustments* report,<sup>32</sup> which established three criteria, quoted with approval by the Appellate Body, for determining whether two products are “like products.” According to the report, one should look to: “the product’s end-uses in a given market; consumers’ tastes and habits, which change from country to country; [and] the product’s properties, nature and quality.”<sup>33</sup>

It is unclear whether the second criterion (consumers’ tastes and habits) could be used to argue that GMO and non-GMO products are not “like products.” Such an approach could result in discrimination against GMO products. If the WTO Appellate Body were so to hold, this would raise difficult issues for the in-

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<sup>28</sup> Voluntary GMO labeling measures are generally governed by the TBT Agreement’s Code of Good Practice for the Preparation, Adoption and Application of Standards. See TBT Agreement Annex 3. Due to time constraints, this topic was not discussed by the author at the conference.

<sup>29</sup> See *id.* art. 2.1.

<sup>30</sup> See *Japan—Taxes on Alcoholic Beverages*, WT/DS8/AB/R (Oct. 4, 1996), 1 BERNAN’S ANNOT. REP. 183.

<sup>31</sup> See *id.*, para. 8.4., at 197.

<sup>32</sup> See Report of the Working Party on Border Tax Adjustments, Dec. 2, 1970, GATT B.I.S.D. (18<sup>th</sup> Supp.) at 97 (1972).

<sup>33</sup> See *Alcoholic Beverages*, *supra* note 30, at 197, quoting Report of the Working Party, para. 18, *supra* note 32, at 102.

ternational trading system. Traditionally, when making a “like product” assessment, GATT and WTO panels have refrained from examining how a particular product is manufactured unless the production processes are detectable in the final product. The result is an unwillingness to examine non-product-related labor and environmental criteria<sup>34</sup>—a status quo very much supported by many WTO members from developing countries. GMO products, however, pose new problems. Due to advances in technology, GMOs are increasingly detectable in many final products.<sup>35</sup> What should be done when, for example, GMOs may have entered the production cycle accidentally, perhaps through cross-pollination, and appear in the product in trace quantities, or when the ability to detect an ingredient made from GMOs is lost as a result of a particular production process? If existing WTO rules are to be applied to GMO products, such difficult questions must be addressed.

Finally, Article 2.2 of the TBT Agreement requires that technical regulations, which includes a labeling scheme, “not be more trade-restrictive than necessary to fulfill a legitimate objective, taking account of the risks non-fulfilment would create.”<sup>36</sup> This provision raises several questions, among them, what qualifies as a “legitimate objective” for TBT purposes? TBT Article 2.2 provides that “national security requirements; the prevention of deceptive practices; protection of human health or safety, animal or plant life or health, or the environment” are legitimate objectives. This non-exclusive list of legitimate objectives does not explicitly protect a consumer’s right to know, nor does it account for many of the moral, ethical, and religious considerations often cited in support of GMO labeling. The European Union GMO regulation, Commission Regulation 1139/98, is predicated in part on a consumer’s right to know, as well as on various ethical considerations.<sup>37</sup> Whether the WTO Appellate Body would find such objectives legitimate for TBT purposes is not yet known.

One of the U.S. government participants at the conference that gave rise to this short article thought it unlikely that the

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<sup>34</sup> “Environmental criteria” refers to processes and production methods not detectable in the final product.

<sup>35</sup> Certain firms are now marketing products designed to detect the presence of GMOs.

<sup>36</sup> See TBT Agreement, art. 2.2.

<sup>37</sup> See Commission Regulation 1139/98, *supra* note 26.

United States would argue that the consumer's right to know was not a legitimate TBT objective.<sup>38</sup> During a 1998 WTO meeting, however, the U.S. government made a submission to the TBT Committee wherein it suggested that the objective of the European Union's GMO regulation (No. 1139/98) might not be legitimate for TBT purposes.<sup>39</sup> From this submission, one could conclude that, within the GMO context, the issue of what objectives are legitimate for TBT purposes is still very much alive.

It is evident that WTO members are becoming increasingly sophisticated in how they treat potential TBT issues. A conference speaker from the Swiss government noted in his presentation that one of the objectives enumerated in the Swiss GMO labeling law is the prevention of "deceptive practices."<sup>40</sup> Not surprisingly, this is one of the legitimate objectives set forth in TBT Article 2.2.

Trade problems are, however, capable of being viewed from different and equally sophisticated perspectives. One example involves the issue of consumer deception. In its submission to the TBT Committee of October 16, 1998, the U.S. government stated that it was "unaware of any evidence that would demonstrate that genetically modified varieties [of soy beans and corn] *as a class* differ from conventional varieties in composition, nutritional value or nutritional effects."<sup>41</sup> The U.S. government further stated that it had "questions about what the E.U.'s legitimate objectives are with respect to providing 'proper information to the final consumer'" and was "concerned that, in fact, the labeling requirements imposed by the regulation could contribute to consumer deception."<sup>42</sup> Given the present lack of scientific evidence, and the lack of experience with GMO labeling, both views concerning consumer deception may now be defensible.

The WTO's members are probably not capable, at this time, of reaching a consensus on how to apply WTO rules to the GMO

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<sup>38</sup> This statement was not part of that participant's remarks but rather was made in casual conversation with the author.

<sup>39</sup> See Submission by the United States, on European Council Regulation No. 1139/98 Compulsory Indication of the Labeling of Certain Foodstuffs Produced from Genetically Modified Organisms, G/TBT/W/94 (Oct. 16, 1998).

<sup>40</sup> Franz Perrez, Swiss Ministry for Economic Affairs. See Perrez, *Taking Consumers Seriously: The Swiss Regulatory Approach to Genetically Modified Food*, this volume at 585.

<sup>41</sup> See Submission by the United States, para. 5, *supra* note 39.

<sup>42</sup> See *id.*

issue. If this is true, the WTO Appellate Body may be asked to examine some of the questions raised above. This will be a politically difficult task for the Appellate Body, not only because the TBT Agreement was not written with the biotechnology industry in mind and scientific evidence for and against GMO products is still lacking, but also because the Appellate Body lacks experience applying the TBT Agreement. The Appellate Body has, however, begun to demonstrate an ability to balance social and legal considerations in order to reach politically acceptable solutions.<sup>43</sup> The *Shrimp/Turtle* decision evidences this point<sup>44</sup> and offers the prospect that a reasonable solution may emerge from the Appellate Body which would provide some guidance until the WTO members reach a consensus on GMO labeling.

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<sup>43</sup> See generally Arthur E. Appleton, *Shrimp/Turtle: Untangling the Nets*, 2 J. OF INT'L ECON. L. 477 (1999).

<sup>44</sup> See United States-Import Prohibition of Certain Shrimp and Shrimp Products, WT/DS58/AB/R (Oct. 12, 1998), 8 BERNAN'S ANNOT. REP. 301.