This article reviews the history and current state of international law governing the application of technical standards to international trade. Conflicts surrounding the use of technical standards in livestock trade are described to illustrate some of the limitations of current GATT codes. The article includes a case study of a US firm's difficulties in exporting high-quality beef to Europe. These illustrations provide the basis for some concluding remarks concerning possible changes in the GATT technical standards agreement that may be made as a result of the Uruguay Round of trade negotiations. © 1993 John Wiley & Sons, Inc.

The advantages of a free and open trading system have been recognized since the time of Adam Smith. However, national governments are also aware that protec-

Lance Kotschwar is a lawyer in the General Council's Office/USDA.

Douglas Simon is President, RF Industries, Lincoln, Nebraska.

E. Wesley F. Peterson is Associate Professor, Department of Agricultural Economics, University of Nebraska-Lincoln.
tionist measures of benefit to particular domestic sectors may lead to substantial short-term political rewards. In an effort to resolve the inherent conflict between the political appeal of protectionism and the economic benefits of open trading systems, the governments of the main trading nations established the General Agreement on Tariffs and Trade (GATT) after the Second World War. The purpose of the GATT is to provide a means for the peaceful establishment of regulations to govern international trade so that all parties to the agreement can share in the gains from expanded world trade.\(^1\) Under the aegis of the GATT, great progress has been made in regulating and reducing the more transparent trade barriers. For example, it is estimated that tariffs on manufactured goods have been reduced from an average level of 40% prior to World War II to less than 5% today.\(^2\)

However, the political appeal of protectionism has not diminished. As transparent trade barriers have declined, many governments have discovered that they can continue to reap political gains from less visible trade barriers while apparently remaining in compliance with their international obligations under the GATT. Such nontariff trade barriers (NTB’s) as quantitative restrictions or the use of technical standards to block imports have become increasingly common. Technical standards include such measures as regulations governing the health, safety or environmental characteristics of products, product content, product labeling, and many others. Theoretically, the purpose of these types of regulations is to protect consumers and producers from unsafe or unreliable products whether produced domestically or imported. However, it is not difficult to draft such regulations in ways that not only accomplish the primary purpose, but also effectively protect domestic producers from foreign competition.

The purpose of this article is to describe the history and current state of international law governing the application of technical standards to international trade. The case of trade in livestock products will be used to illustrate the kinds of conflicts that can arise in the application and regulation of technical standards.

**TECHNICAL STANDARDS IN INTERNATIONAL LAW**

National laws regulating technical standards have always been an impediment to the free movement of goods in international commerce. The contracting parties to the GATT have frequently noted the effects of such regulations and called for their removal. For example, in 1952, the GATT recognized that “consular formalities” often served to hinder trade and recommended that they be abolished.\(^3\)

The Agreement on Technical Barriers to Trade (hereafter referred to as the Agreement), adopted in 1980, was designed to deal with regional and national standards, technical regulations, and certification systems that have the effect of creating barriers to international trade.\(^4\) The Agreement clarifies general GATT principles that affect technical standards and delineates procedures for parties to follow when enacting new standards or regulations. An excerpt from a report by the Director General of the GATT highlights the competing, and sometimes conflicting, interests that can affect international trade:

> Technical regulations are essential in modern society. They are adopted to protect human and animal life and health; to ensure that products offered to the consumer meet the necessary levels of quality, purity, technical efficiency and adequacy to
perform the function for which they are intended; to protect the environment; and for
reasons connected with safety, national security, and the prevention of deceptive
practices.

However, international trade can be complicated and inhibited by disparities
between regulations, adopted at local, state, national or regional levels; by insuffi-
cient information on the often complex and detailed requirements; by the introduction
of regulations without allowing time for producers, especially foreign ones, to adjust
their production; by frequent changes to regulations which create uncertainty; by the
drawing up of regulations in terms of design rather than performance in order to suit
the production methods of domestic suppliers, thus causing difficulties to suppliers
using different techniques; by exacting testing requirements; by the denial of access
to certification systems; and finally by the manipulation of regulations, testing or
certification to discriminate against imports. The problem has been to strike a bal-
ance between the essential needs referred to in the preceding paragraph and the
demand of exporters that their goods should not unreasonably or unfairly be excluded
from the market.5 (p. 62)

The Agreement does not attempt to eliminate all technical specifications act-
ing as barriers to trade. Rather, it attempts to establish rules between govern-
ments relating to the procedures by which regulations and certification systems
are developed, adopted, and applied to both domestic and imported products.6
Countries that are signatories to the Agreement are obligated to (1) develop
regulations that will minimize adverse effects on international trade while still
accomplishing their primary public policy goal; (2) treat imported products the
same as domestically produced items; (3) allow importers to have access to
necessary domestic certification systems; (4) incorporate international standards
into new domestic regulations or amendments to existing domestic regulations;
(5) adhere to a uniform system of procedures dealing with notification; (6) supply
information about domestic regulations to any interested party; and (7) allow
other parties to react to proposed regulations prior to their implementation.7

Three of the original GATT Articles (Articles III, XI, and XX) provide general
guidelines on technical standards and two others (Articles VIII and IX) concern
the use of nontariff barriers to trade.8 These Articles prohibit the use of internal
regulations and requirements to protect domestic producers from imports. They
require that imports be treated in the same way as products of domestic origin
and specifically prohibit the use of such measures as fees for inspection, cer-
tification, or licensing, or any other kind of surcharge that is not equal to the cost
of actual services required for both national and imported goods. In addition,
Article IX of the GATT provides that imported products should be treated the
same as domestic products with respect to product labeling. Exceptions to these
requirements can be invoked under Articles XI and XX, which recognize a
country's legitimate interests in safe food supplies, and protection of public
health and safety.8

In general, the technical standards agreement simply expands on these basic
GATT provisions. Article 2 of the Agreement covers all aspects of the prepara-
tion, adoption, and application of technical regulations and standards. Before
instituting a new regulation that will affect imports, parties are required to allow a
reasonable time for exporters to react, and, if necessary, conform to the new
regulation. This means that all importing countries must have an effective vehicle
for publicizing changes in their regulations so that potentially affected parties
have notice. Article 2 also requires parties to assist international standardizing bodies whenever possible, especially when dealing with products for which a party already has technical regulations or standards. Section 2.4 further provides that a country’s technical regulations and standards should be in terms of performance rather than design or descriptive characteristics. This is aimed at eliminating discrepancies due to differences in production techniques by emphasizing the specifications of the end product rather than the procedures for its manufacture.¹

Articles 3 through 9 of the Agreement are intended to insure that no entity, whether local or national, treats imports in a manner inconsistent with the treatment of domestic products. They also specify that national governments must insure that subordinate organizations maintain rules consistent with the national system.

Article 10 of the Agreement requires all signatories to have an “enquiry point” that allows interested parties to obtain information about specific regulations, proposed changes, and any necessary certification systems operated by bodies other than the national government. This Article, referred to as the “transparency provision” of the Agreement, obligates signatories to “let the world know” about their respective regulations and procedures.¹

Article 14 of the Agreement deals with dispute procedures. During the original drafting of the Agreement, the parties expressed concern over the application of technical regulations (i.e., health and safety procedures) that necessarily involved highly technical matters. Many felt that disputes about these matters could not be well-handled under the normal GATT dispute settlement process, which uses a panel of trade experts rather than technical experts. Consequently, the Agreement provides that if no satisfactory results are reached under normal consultations, either party has a right to the establishment of a technical expert group.⁴ The members of this group must have the necessary credentials in the disputed subject matter area. And, if a satisfactory agreement still cannot be reached, the parties are entitled to have a review panel established pursuant to the normal dispute settlement provisions of the GATT.

TECHNICAL STANDARDS AND TRADE IN LIVESTOCK PRODUCTS

Legal Applications of the Technical Standards Agreement to Livestock Trade Disputes

The Agreement on Technical Barriers to Trade has been utilized rather sparingly since its inception. Of the disputes that have arisen under the Agreement, the most prominent have concerned trade in livestock products.

In July 1980, the United States issued a complaint against the United Kingdom, claiming that the United Kingdom had used a European Community (EC) Directive to prevent the importation of US poultry. This directive concerned the process used to cool poultry. The standard method in the United States involved cool water being circulated over the poultry, with both the water and the poultry moving in the same direction. In contrast, the EC Directive required the water to flow over the poultry from the opposite direction. Realistically, the process required by the EC Directive is better aimed at reducing the chances of con-
tamination because fresh water is constantly being introduced into the system. However, the United States considered the action by the United Kingdom to be a violation of GATT Article III because poultry produced in the United Kingdom was exempt from the requirement. Consultations had not led to a satisfactory compromise and the United States consequently requested the establishment of a panel pursuant to the GATT dispute procedures to make recommendations and findings.  

In October 1980, the EC responded and claimed that it had notified all third country exporters, giving them ample opportunity to adjust their processes to conform with the Community regulations. The EC also stated that there was no significant impediment to the volume of US exports because the exporting firms had been able to adjust rapidly to the requirements of the directive. The United States eventually withdrew its request for a panel examination, but reserved its right to reconvene the action at a later time. As a result of this “chicken chilling” controversy, the United States did request the Agreement Committee to determine the applicability of the Agreement to the situation.

The most well-known dispute arising under the Agreement has been the EC’s 1987 ban on growth hormones in meat. Like the “chicken chilling” dispute discussed previously, this dispute involved the application of regulations governing processes and production methods (PPM). Article 14.25 of the Agreement provides that the dispute settlement mechanisms can be invoked if a party believes that the Agreement is being circumvented by the specification of regulations in terms of PPM. Recall that the Agreement primarily concerns the characteristics of final products because it discourages countries from defining regulations in terms of PPM. The hormone case stemmed from an EC Directive prohibiting the use of growth-promoting hormones in farm animals used for food production, with an exception for certain therapeutic purposes. The United States claimed that the Directive was not based on scientific evidence and constituted an unjustifiable restriction of trade.

In January 1987, the United States requested consultations with the EC pursuant to the technical standards agreement. After several rounds of unsatisfactory consultations, the United States requested an investigation. The EC maintained that the hormone ban was a regulation based on a PPM specification, which was not covered by the Agreement except under Article 14.25. The EC claimed that in order to invoke Article 14.25, the United States would have to prove that the EC intentionally circumvented the Agreement by using a PPM regulation. The EC also opposed any dispute settlement that involved a purely legal review of the circumvention issue. The United States rejected all of these arguments citing, among other reasons, the impossibility of proving intentionality and the lack of support for this interpretation in the negotiating history of the Agreement.

In July 1987, the United States requested the formation of a technical experts group, which would examine the scientific aspects of the case. The EC blocked the request, stating that an initial review was required to determine whether the Agreement is applicable to PPM regulations. Eventually, the United States took unilateral action against the EC by invoking Section 301 of the Trade Act of 1974. Under this Act, a 100% ad valorem tariff on $100 million (the estimated value of the lost US meat exports) of EC imports, ranging from fruit juices to pet food, was imposed.
Another hormone dispute arose shortly after the beef hormone clash when the EC imposed a temporary ban on the use of bovine somatotropin (BST), a hormone that can increase milk production up to 30% when given to dairy cows.\textsuperscript{13} The EC claimed that the temporary ban (originally until the end of 1990 but extended until the end of 1993) would allow it time to develop and implement new regulations necessary for the proper administration of the hormone.\textsuperscript{14} The United States argued that the ban was an unnecessary obstacle to trade that was inconsistent with the provisions of the Agreement.

**Livestock Trade Disputes in Practice**

The legal application of the technical standards agreement chronicled in the preceding part of the paper reveals some of the arguments used by the EC and United States in the dispute over trade in livestock products. The purpose of this part of the paper is to discuss the impact of the US–EC dispute at the level of firms and consumers affected by these technical barriers to trade. This discussion will highlight the way in which ambiguities in the Agreement open the way for divergent interpretations of its provisions, thereby allowing governments to pursue domestic objectives that are contrary to the spirit of the Agreement.

Because of their perishable nature, most countries apply a wide range of sanitary regulations to livestock products. These technical standards can be justified on the grounds that governments have a responsibility to protect their citizens from disease and from products that are harmful or unsafe. To avoid placing domestic producers at an unfair disadvantage, as well as to protect consumers, such standards are generally extended to imports of similar products. The potential need to apply domestic standards to imports for reasons of health or safety is explicitly recognized in Article XX of the technical standards agreement. However, it is frequently difficult to distinguish a technical standard applied to trade for legitimate health and safety reasons from one that is really designed to be a nontariff trade barrier.

Some would argue that such distinctions can be made on the basis of scientific evidence. Leathes and Terry report that the Lamming Committee, set up by the European Commission to evaluate the effects of growth promoting hormones used in livestock production, found five licensed hormones to be safe if administered in scientifically prescribed dosages.\textsuperscript{15} However, the Commission of the European Communities elected to link the issue of the growing EC beef stocks to the enhanced productivity realized from using growth promoting hormones. This "social" criterion was given equal weight with "scientific" criteria in the decision to ban the use of hormones.\textsuperscript{15} Richard Simmons, Member of the European Parliament, pointed out that:

> It is manifestly stupid to ban growth promoters for use in beef cattle on health-risk grounds just because we have a surplus of beef. If we follow that argument, we should ban tractors on smoke-emission grounds because we have a surplus of grain.\textsuperscript{15} (p. 56)

The introduction of social criteria opens the door for a host of nonscientific considerations in the design of technical standards. In the case of growth promotants, political pressure from consumer activists was instrumental in the adoption of the ban.\textsuperscript{16} In addition, the ban proved to be useful for other political purposes
because it serves to restrain the growth in the production of a surplus commodity in the EC. It turns out that European consumers may in fact run greater health risks because an active black market for hormones has developed with producers clandestinely injecting inappropriate dosages that could lead to human health problems.\textsuperscript{16}

Leathes and Terry\textsuperscript{15} note that the Lamming Committee was suspended before releasing its final scientific report indicating the safety of hormones when used at prescribed levels. Furthermore, they report that on November 21, 1985, after a meeting in London with the National Farmers' Union and three days after the British Government questioned his actions, the EC Commissioner in charge of agriculture, Frans Andriessen, replied on his decision to ban the use of hormones:

> The use of hormones in beef and other meats is a political question. Of course, when you take a political decision, scientific advice is important. It is important, but it is not decisive.\textsuperscript{15} (p. 67)

Clearly, the United States and EC hold fundamentally different views on both the danger of hormones and the factors that should be used in determining the need for technical regulations. The US position attaches great weight to scientific evidence and rejects the use of the social and political criteria that play a role in EC decisions. Another aspect of the conflict is the unwillingness of the EC to clearly outline the procedures and guidelines for complying with its regulations. In principal, this lack of clarity violates the transparency provision of the technical standards agreement. As the hormone dispute was developing, the EC adopted another regulation, the Third Country Meat Directive (TCMD), requiring compliance with EC procedures for livestock slaughter in non-EC countries wishing to export to the EC. As in the previous cases, this Directive deals with processing procedures so that the relevance of the technical standards agreement is unclear. Thus, although the EC technical standards applied to livestock trade appear to violate several of the provisions of the technical standards agreement, its application to these disputes is unclear. In the following section of the article, the practical difficulties faced by an export firm attempting to comply with the EC ban on hormones and the TCMD are described.

**The Case of Landmark Meats**

Landmark Meats was organized in 1990 to export high-quality boneless chilled beef to two retail grocery chains in the United Kingdom.\textsuperscript{17} These retail outlets demanded subprimals with a maximum of $\frac{1}{2}$" external fat and marbling meeting USDA high select quality grade. Adequate supplies of fresh hormone-free beef were available in the United Kingdom. However, the retail outlets were searching for a consistent supply of high-quality grain-fed meat that would satisfy quality conscious consumers. Landmark Meats organized cattle financing, purchasing, contract processing, and freight forwarding, and was willing to meet the hormone-free specification demanded by the EC. Three ocean containers of fresh meat were processed and exported to the United Kingdom in the fall of 1990 in compliance with the requirements of the hormone ban and the TCMD.\textsuperscript{17}

Chemical analysis of beef tissue can be used to detect the presence of hor-
mones and heavy metal residues and affidavits confirming hormone-free production can be obtained. However, these measures increase the transactions costs, leading to higher retail beef prices. If enough technical standards are imposed, the retail cost of imported beef can be raised to the point where no trade will take place despite the fact that customers are willing to pay a premium for hormone-free beef. One difficulty faced by Landmark Meats in complying with the EC requirements was to determine how samples for the chemical tests were to be taken. Neither the USDA export coordinators nor the European Commission would explain the sampling procedures, making compliance more difficult and raising the costs of assembling shipments.

In order to supply the markets in the United Kingdom with high-quality beef, Landmark Meats had to locate cattle feeders who would be willing to provide hormone-free meat. To comply with the EC regulations, cattle feeders had to apply for approval of their feedlots and supply affidavits confirming that the cattle were produced without hormones. The application would be forwarded through the EC delegation in Washington to the EC Commission in Brussels where final approval would be considered. An EC veterinarian, based in Washington, personally visited feedlots and processing facilities to determine their suitability. Identification by brands, tags, or other means was required. Despite these impediments, Landmark Meats had little difficulty locating meat producers interested in providing hormone-free meat for export.

In December 1990, the certification allowing US facilities to process and export meat to the EC was revoked under the TCMD. Prior to this action, it was possible to comply with this Directive although the rules and procedures for compliance were as ambiguous as those related to hormone-free certification. The TCMD calls for special procedures to prevent cross contamination and these procedures require additional equipment. Furthermore, when an EC veterinarian inspects a plant, other issues may arise such as temperature control devices and monitoring equipment. Often the EC veterinarian had to visit a plant several times. The approval period for processing plants has reached three years in some cases. In addition, some of the plant improvements could not be justified if insufficient volume was likely to be processed. Landmark Meats was able to overcome the obstacles associated with both the hormone ban and the TCMD until the de-certification of all US plants at the end of 1990 put an end to these operations.

A number of US processing plants have recently been re-certified under the TCMD. The export operations of Landmark Meats have been suspended until suitable Midwest processing facilities are re-listed. It has been suggested that the disputes over livestock trade between the EC and the United States were part of a larger political–economic conflict that was made more acute by the impending Uruguay Round trade negotiations on agriculture. Meat exports to the EC from other countries have generally not been seriously affected. For example, Australia and Argentina continue to sell meat in United Kingdom retail stores. The characteristics of the meat are somewhat different, but the presence of trade suggests that it has been possible for these countries to reach an accommodation with the EC.

Landmark Meats alleges that the EC dragged its feet in establishing criteria and explaining the steps for compliance with its technical standards in an effort to prevent imports in the face of its self-induced beef surplus. US officials
appear to have taken a hard-line negotiating position on these issues arguing that the EC had suspended trade for socioeconomic reasons, rather than on the basis of scientific evidence. At the same time, part of the motivation for the rigid US position is a fear that US consumers might come to believe that the US meat supply is contaminated with harmful and unwanted elements. Note that this concern is based on socioeconomic considerations and is, in fact, quite similar to some of the rationales offered by the EC for the hormone ban. These observations highlight the political nature of the dispute.

**SUMMARY AND CONCLUSIONS**

The conflict over technical regulations of livestock trade between the EC and the United States illustrates some of the deficiencies of the technical standards agreement as drafted in the late 1970s. A major deficiency concerns the application of the Agreement to PPMs. This question is at the heart of the disputes between the United States and EC over hormones and slaughter processes. It was also the basis for the decision of a GATT panel that US restrictions on imported tuna from Mexico are illegal under the GATT. The drift nets used by the Mexican tuna fleet also kill dolphins and are no longer used by US tuna fishers. However, the use of these nets is part of the production process, and, therefore, is not covered by the Agreement.

For the Agreement to apply to these cases, it would have to be proved that a country has intentionally drafted its regulations in terms of PPMs in order to circumvent the Agreement. Because of the difficulty of proving intentionality, the burden of proof in this case is onerous, although not impossible as shown by the tuna dispute. The problem could be solved if conflicts of this nature were treated in the same manner as interstate trade disputes. Both the US Supreme Court and the European Court of Justice have repeatedly struck down state legislation that impedes interstate commerce when no legitimate public interest could be shown by the state that passed the regulation.21

The transparency provisions of the Agreement have also proved inadequate. The scope of these provisions is largely limited to notification. There is little in the Agreement that would control the drafting of the vague and cumbersome rules that were such impediments to Landmark Meat's export activities. In addition, notification that a rule exists is not the same as providing clear instructions for complying with the rule. In many cases, the directors of Landmark Meats knew of the rules but were unable to obtain the detailed information needed for compliance.

Even in the case of notification, the rules related to regional bodies such as the EC are insufficient to prevent circumvention of the spirit of the Agreement. For example, before a regional body like the EC can report new regulations or amendments to the GATT, a consensus must have already been established among member-states. Any subsequent comments on these proposed regulations by other interested international parties cannot realistically have any effect on their implementation because the member-states have, by definition, already agreed on the regulations as a condition of the EC making them public. Furthermore, monitoring the use of technical standards is difficult because technical regulations are published at the time they are proposed for implementation at the national level, not when the regulations are promulgated by the EC, the regional
certification system. Thus, decisions taken by the EC do not actually enter into force until they are made part of the national laws of the member-states.

This issue was identified by the drafters of the original Agreement, who foresaw that federal-type governments, unlike centralized governments, would have to ensure that all regulations of the states belonging to the federation were consistent with the Agreement. GATT rules require federal governments to use their best efforts to ensure that their state and local governments, as well as nongovernmental and regulatory bodies (such as the EC), amend their respective regulations to conform with the provisions of the Agreement. However, this requirement has proved inadequate for regulating situations such as the one described above because there is no opportunity for other states to challenge regulations that have already been approved by national legislatures prior to their publication by the EC.

The deficiencies in the Agreement have been the object of extensive discussion during the Uruguay Round of multilateral trade negotiations. Specific revisions that improve and clarify the present purview of the Agreement and extend its coverage and scope have been agreed upon. The amendments clarify the key concept of unnecessary obstacle and introduce criteria for determining whether a measure is necessary. More importantly, the terms of the Agreement are also extended to standards specified in terms of processes and production methods. If this amendment is adopted, much of the ambiguity seen in the US-EC disputes over livestock trade would disappear.

In addition, an agreement on sanitary and phytosanitary standards has nearly been completed by a technical working group on agriculture in the Uruguay Round. Because agricultural products are subject to the technical standards agreement, the rules that will eventually come from the sanitary and phytosanitary working group will be incorporated into the Agreement. One of the objectives of this group is to implement a dispute settlement procedure that bases its decisions on sound scientific evidence rather than imprecise allegations of harm. The results from the sanitary and phytosanitary agreement, when implemented within the existing structure of the technical standards agreement, could result in coherent procedures for analyzing technical international trade disputes such as the hormone battles between the United States and the EC.

These changes are not likely to be implemented if the current round of trade negotiations ends in failure. Moreover, even if they are implemented, it is not clear that they will resolve all the problems faced by Landmark Meats. For example, increased reliance on scientific criteria and tightened rules on transparency may still not be enough to prevent regulations from being drafted in ways that are so vague and cumbersome as to raise the transactions costs of international trade. The application of technical standards that are clear and nondiscriminatory in international trade may require more good faith on the part of the GATT signatories than has been forthcoming in recent years. Nevertheless, some progress in bringing technical standards under GATT discipline is of great importance for the international trading system and the revisions currently under discussion do represent significant improvements.

REFERENCES

17. D. Simon, personal communications based on experiences working for Landmark Meats, 1990 to present.