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Why Can't U.S. Beef Compete in the European Union?

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Executive Summary

The stringent guidelines for producing, harvesting, and shipping certified non-hormone treated beef for the European Union create additional costs that greatly reduce the competitiveness of U.S. beef. What had once been a large market for beef variety meats and then a niche market for non-treated beef has all but vanished because the E.U. hormone ban and regulations for producing and certifying non-treated beef have made U.S. product too expensive to export. Some producers continue to obtain U.S. Department of Agriculture certification for their non-hormone treated beef, but most are selling their fully traceable, certified cattle into the domestic natural beef market at no additional premium compared with cattle verified as non-treated via a producer-signed affidavit. As an international trade issue, the beef hormone ban (and U.S. retaliation) continues to play a role in policy decisions and trade negotiations. As more countries negotiate accession to the European Union, for example, the United States stands to lose additional trade potential. In addition, although retaliation appears to be blocking trade at about the appropriate level, some E.U. countries may actually be benefiting from the retaliatory duties applied to some agricultural products based on country of origin.

Keywords: beef hormone ban, E.U. enlargement, natural beef, NHTC program, non-hormone treated beef, retaliatory tariffs, traceability.

WHY CAN'T U.S. BEEF COMPETE IN THE EUROPEAN UNION?

Introduction

Since the European Union banned imports of beef treated with growth-promoting hormones in 1989, the United States has been unable to fill the 11,500 metric ton quota allowed for high-quality, non-hormone treated beef.¹ In 1999, U.S. exports to the European Union were temporarily suspended, and even less beef has been shipped since exports resumed. As discussed in this paper, the stringent guidelines for producing, harvesting, and shipping certified non-hormone treated beef for the European Union create additional costs that greatly reduce the competitiveness of U.S. beef. What was once a niche market for producers and processors has all but vanished, yet some producers continue to obtain U.S. Department of Agriculture (USDA) certification for their non-hormone treated beef. In this paper, a short overview of current U.S. trade flows with the European Union is presented, followed by an estimate of the additional costs of producing beef for that market. Then, given that exports to the European Union are so low and the costs of producing, processing, and shipping are so high, the paper discusses where producers are marketing their non-treated cattle and beef and whether they are receiving an adequate premium to cover their additional costs. Results from these informal discussions follow the cost estimates.

As an international trade issue, the beef hormone ban (and U.S. retaliation) continues to play a role in policy decisions and trade negotiations. As more countries negotiate accession to the European Union, for example, the United States stands to lose additional trade potential. The final sections of this paper discuss U.S. retaliation against the E.U. hormone ban and some implications of E.U. enlargement.

Current Trade Flows

After the 1989 ban on beef from hormone-treated cattle, the United States exported a small but relatively constant volume of beef to the European Union. In July 1999, the

European Union reported finding traces of growth-promoting hormones in shipments of U.S. beef, and the USDA voluntarily suspended exports and implemented a more rigorous system of regulation and controls. Exports resumed in September 1999.

Maintaining a consistent E.U. market for U.S. non-treated beef has been an ongoing challenge, but the E.U. market for U.S. beef all but disappeared after the temporary market closure. From January through June 2002, only 510 metric tons of fresh/chilled/frozen U.S. beef were shipped to the European Union. According to the U.S. Meat Export Federation (USMEF) (2002), most of this beef appears to have been destined for U.S. military bases, embassies, or cruise ships; only a very small amount was actually sold into the E.U. market.

Table 1 compares USDA data for beef and beef variety meat exports to the European Union for 1995 through 2001 and for the first six months of 2002. These data do not differentiate beef purchased for sale in the E.U. market from beef shipped to the destinations just mentioned. Also, beef from E.U.-approved plants in other countries can be imported into the United States, processed at E.U.-approved U.S. plants, and re-exported to the European Union.

The data in Table 1 also do not differentiate non-treated variety meats for human consumption from variety meats used in the pet food industry. Before implementation of the hormone ban, the European Union was a major import market for U.S. variety meats. In 1987, the European Union imported 73,372 metric tons of beef liver, tongues, and other variety meats from the United States, primarily for human consumption (Hayes 1989). Since the ban, only non-treated variety meats can be used for human consumption, but some variety meat and by-product imports for the pet food industry are allowed from non-treated animals. During the January through June 2002 period, just over 2,500 metric tons of variety meats were exported, all for use in pet foods.

TABLE 1. U.S. beef and beef variety meat exports to the European Union (in metric tons)

	Calendar Year							Jan.-June
	1995	1996	1997	1998	1999	2000	2001	2002
Beef, fresh/chilled/frozen	4,506	3,982	4,819	6,265	6,106	4,847	1,866	510
Beef, prepared/preserved	309	458	255	409	192	132	174	6
Beef variety meats	9,053	8,681	12,741	34,247	16,966	23,576	12,063	2,524

Source: U.S. International Trade Commission 2002.

The European Commission has stated that

The European pet food industry relies on third countr[y] sources for the supply of raw material for pet food production. In order to allow this trade to continue, th[is] proposal establishes that the import of pet food and raw material for pet food production, derived from animals which have been treated with certain substances prohibited in accordance with Directive 96/22/EC, shall be permitted under specific conditions to be laid down by the Commission. (Commission of the European Communities 2000)

It appears that this market segment will remain open to U.S. exporters, but the importation of variety meats from treated cattle continues to cause discomfort in the European Union, and this trade may be subject to additional controls. Recently, the European Union proposed that imports of U.S. variety meats for the E.U. pet food industry be treated with visible “markers” to distinguish them from non-treated products intended for human consumption (Pet Food Institute 2002).

The Additional Costs of Producing Non-Hormone Treated Beef

As shown, very little trade is occurring between the United States and the European Union. The additional costs of producing, slaughtering, and shipping are the primary deterrent to this trade. The following sections break down the additional costs associated with producing certified non-hormone treated beef and discuss the alternative markets producers are finding for their non-hormone treated beef.

Non-Hormone Treated Cattle Program Certification

To become eligible to export non-treated beef, producers must obtain certification for their cattle through the USDA's Non-Hormone Treated Cattle (NHTC) program. Under this program, the USDA certifies that cattle “have never been fed or treated with hormonal growth promotants” (USDA 2001c). The USDA's Agricultural Marketing Service (AMS) administers the NHTC program from an animal's birth through delivery to the packing plant door. As of June 2002, sixteen farms, ranches, or feedlots were registered under the NHTC program.

The NHTC program is operated on a user-fee basis, and producers pay an hourly rate (as published in the *Federal Register*) for USDA staff time and expenses needed to

certify the production facility. Producers are required to prepare a detailed program manual that includes “clear, sequential, written operating policies and procedures or work instructions, specific to the farm or ranch seeking approval, that address all program requirements...” (USDA 2001b). The producer pays the AMS staff time required to ensure that the program manuals and other documentation comply with the NHTC program requirements.

The AMS also conducts audits that include document reviews, on-site compliance audits, and follow-up or surveillance audits. As part of the on-site audits, the AMS auditor inspects the NHTC herd, examines the producer’s documentation, meets with the herd’s veterinarians, visits feed providers, and examines feed labels. Producers are charged for travel expenses, inspector time, and the per diem costs required for on-site audit procedures. An estimated \$3,000 is required for the initial certification process, including program manual and documentation reviews and the on-site audit. Once a producer is certified, annual compliance audits are conducted. (In cases where a problem is discovered, follow-up audits are sometimes needed.) USDA auditors attempt to combine audit trips to producers located within a reasonable proximity to each other and to prorate the travel costs among these producers. As a result, on-site audit costs can vary widely among producers. NHTC producers estimated the fees paid to USDA for their annual audits at between \$500 and \$2,000 annually.

These estimated audit costs do not include the cost of the producer’s labor to develop a program manual and to prepare the extensive documentation involved in obtaining and maintaining certification. None of the producers contacted for this study provided an estimate of his or her own labor costs for the paperwork, but all agreed that documentation requires a large number of hours. The labor-intensiveness of the documentation was the most common comment from producers about the NHTC program.

Given the extensive documentation requirements for certifying cattle, some producers expressed the opinion that NHTC production is best suited for relatively small calving-through-finishing operations and that cattle transfers would be almost impossible to do. On the other hand, spreading these fixed costs over fewer animals makes it necessary to earn an even higher premium for their non-treated cattle than that needed for larger herds.

Producers with relatively large herds have shown themselves able to meet the NHTC documentation requirements, so the program is workable for a broad range of herd sizes.

Production Costs

The advantages of using growth-promoting hormones include improving feed efficiencies, speeding weight gain, and producing a leaner beef product preferred by health-conscious consumers. According to Hanrahan (2000), hormones are used on approximately 63 percent of all cattle and about 90 percent of the cattle on feedlots in the United States. In large commercial feedlots, usage approaches 100 percent. The additional cost of raising cattle without growth-promoting hormones varies but generally is estimated at between \$15 and \$40 per animal (USDA 2000).

This cost will be incurred by any producer who does not use growth-promoting hormones, so it is not unique to the NHTC program. However, non-hormone treated beef is required by the European Union and represents an additional cost relative to beef raised for the U.S. commodity market.

Packing Plant Certification

The USDA's Food Safety and Inspection Service (FSIS) oversight comes into force as the animal enters the packing plant. Non-treated animals can be slaughtered at any U.S. plant, but beef destined for the European Union must be harvested in a plant approved for export to the European Union. Although the European Union now recognizes USDA plant inspection, final E.U. approval may require some plant modifications. Modification costs vary from plant to plant, so no estimate of this cost is provided.

In addition to any modification costs, packing plants pay a fee to USDA/FSIS for inspection services. Unlike the NHTC program, only the inspector's time and travel costs are included; no per diem fees are charged. FSIS also does not charge for office time spent on paperwork and documentation. An inspection trip for plant certification costs approximately \$500. Once a plant has achieved certification, annual review is not required but is recommended. As of August 2002, only one U.S. plant was certified to slaughter U.S. beef for export to the European Union. Another had been approved by FSIS and was awaiting final E.U. approval, which usually takes between 21 and 60 days. The entire plant certifica-

tion process takes approximately six months from the time a plant states its intention to become certified through final E.U. approval.

Additional Residue Testing

In addition to plant approval fees, the Additional Residue Testing Program adds substantial costs to beef destined for the European Union. There are two layers of costs for the testing process.

First, only one laboratory in North America—Maxxam Analytics, Inc., in Mississauga, Ontario, Canada—is approved to test the urine and animal tissue samples for meats produced for human consumption in the European Union. After the European Union announced that hormone-treated meat had been discovered and the USDA closed exports in 1999, the European Union would not approve any of the North American labs that had been performing tests for U.S. and Canadian meat. Maxxam Analytics agreed to bring their lab into compliance with E.U. and USDA/FSIS testing requirements. Gaining this validation required that Maxxam make a sizeable investment, and a small group of meat companies committed funds to Maxxam to pay down expenses and other non-recoverable costs involved in meeting all the requirements (Argosy Enterprises, LLC 2002).

In exchange for their contributions in meeting the validation costs, the meat companies entered into a five-year agreement with Maxxam that any U.S. company requiring meat testing must join the group for a fee of \$30,000. The original members of the group would receive this fee pro rata so they could recoup some of their initial contribution.² The agreement became effective September 1, 2000. Thus, after August 31, 2005, non-member meat plants will no longer have to join the group or pay this fee.

The second layer of costs is the actual testing cost. In its agreement with the meat companies, Maxxam agreed to keep testing costs constant for the first two years. The cost for the full schedule of tests required by the European Union was \$1,950 for steers and heifers (16 compounds) and \$1,600 for cows and other bovine animals (14 compounds).³ These fees were effective through August 31, 2002; a current schedule was not available. If a banned substance were to be detected, Maxxam would run a second (confirmation) analysis and submit the samples, results of the first analysis, and results from the confirmation analysis to the USDA/FSIS. An additional fee would be charged for confirmation analyses.

After U.S. shipments resumed in 1999, the European Union required 100 percent testing of exported lots. In September 2000, the European Union reduced the testing requirement to a 20 percent test-and-release system that allowed shipments to be released pending receipt of final test results. In February 2002, the European Union approved random testing. The number of randomly tested samples is determined by a risk assessment based on the number of animals slaughtered (USDA 2002a).

Shipping Costs

The small size of the E.U. market means that exporters cannot consolidate their product into large shipments. Some beef is being flown into the European Union, making shipping costs extremely high. Once the beef arrives, the 20 percent tariff on in-quota beef is based on the CIF (cost, insurance, and freight) value, so high freight costs can substantially increase the tariffs that are charged against the product. One producer noted that a system that levies tariffs only on the value of the product would have a large, positive impact on U.S. competitiveness.

Marketing the Entire Animal

Finally, as is the case in most international markets, E.U. importers want only specific cuts and not the entire carcass. As a result, the remainder of the carcass must be sold into alternative markets at a price that, combined with the price for the cuts purchased by the E.U. importer, provides a reasonable profit. Table 2 summarizes the additional costs discussed in this section.

If Not the European Union, Where Are the Markets?

Given the higher costs of production, harvesting, and residue testing and given that so little volume is being shipped to the European Union, an obvious question is where the non-treated beef is being sold. Several certified NHTC producers were contacted to understand why they maintain certification and where they are marketing their cattle. Informal conversations with producers revealed that several of them had obtained certification based on perceived market potential and they remain optimistic that exports to the European Union will eventually increase. For the most part, producers are selling

TABLE 2. Additional costs of producing non-hormone treated beef for the European Union

Producer Costs	
Higher production costs for not using hormones	\$15 to \$40 per head
Initial NHTC Program documentation processing and audit by USDA/AMS	up to \$3,000
Annual NHTC Program audit by USDA/AMS	\$500 to \$2,000
Labor for maintaining NHTC Program paperwork and documentation	Not estimated
Slaughter Plant Costs	
Initial plant certification inspection by USDA/FSIS	\$500
Annual plant inspection (not required, but recommended)	\$500
Plant modifications to meet EU requirements	Not estimated
One-time validation fee for using Maxxam Analytics (effective until August 31, 2005)	\$30,000 ^a
Additional residue testing for product from steers and heifers	\$1,950 ^b
Other Costs	
Shipping small volumes and using air freight	Not estimated
Marketing the remainder of the carcass	Not estimated

^aThis fee is \$10,000 for companies associated with the original export group who invested in the validation costs for Maxxam Analytics.

^bTests are conducted randomly based on total slaughter volume. The reported cost is based on the price schedule effective through August 31, 2002.

their cattle into domestic niche markets, but not all of these markets provide high enough returns to compensate producers for the additional production and certification costs. The producers contacted for this study mentioned a range of markets. These included direct sales of beef at farmers markets and on the Internet, marketing live cattle under other USDA certified beef programs, selling live cattle into the commodity beef market at no additional premium, selling cattle to processors of natural beef, and providing very high-quality beef to specialty retail and hotel, restaurant, and institutional (HRI) markets.

Based on producer responses, the largest market for NHTC program beef is the U.S. natural beef market. The USDA states that beef labeled as natural “cannot contain any artificial flavor or flavoring, coloring ingredient, chemical preservative, or any other artificial or synthetic ingredient; and the product and its ingredients are not more than minimally processed (ground, for example).” Thus, “all fresh meat qualifies as natural” (USDA 2002a). However, many natural beef processors implement additional standards, such as hormone-free (and/or antibiotic-free), and can make the appropriate claims about their products.

Beef sold as non-hormone treated in the United States requires only an affidavit declaring that growth-promoting hormones have not been used when producing the cattle. Normally, certified NHTC producers do not receive any greater premium for their beef in

the natural market, so certification costs give NHTC producers a higher break-even point than that for other producers of non-treated beef.

Although USDA NHTC certification has opened additional markets for some beef, the additional costs of NHTC certification generally reduce producers' competitiveness in the U.S. market. However, a frequent comment from producers is that they believe the NHTC program has given them a head start on full traceability, which many believe will be required eventually in many markets. Some NHTC producers noted that consumer education and energetic marketing could help increase niche market opportunities. They also noted that it would be important to protect these niche markets and any resulting premiums by ensuring the beef is non-hormone treated. They believe NHTC certification is the best guarantee that treated beef is not inadvertently labeled as hormone free, potentially causing a loss of consumer confidence in the domestic and export markets.

U.S. Retaliation Against the E.U. Hormone Ban

On July 29, 1999, the United States retaliated against the E.U. ban by placing 100 percent ad valorem tariffs on selected agricultural products, based on country of origin. The objective of the duties was to block \$116.8 million in trade of selected agricultural products from the European Union. Appendix Table A.1 lists the products and countries of origin for which the 100 percent duties have been applied. The inclusion of beef and beef offal on the list was largely symbolic because so little E.U. beef was being exported to the United States. The United Kingdom consistently voted against implementing the hormone ban on imported beef and it is not the country of origin for any products subject to retaliatory duties.

Because the duties were implemented in July 1999, the first full year of trade under the duties was 2000. This paper compares 1998 data (pre-retaliation data) with trade data for 2000 and 2001. Appendix Table A.2 presents the value of U.S. imports of the agricultural products subject to retaliation and Table A.3 shows the same data by country. As shown, imports of the products dutiable under retaliation were down \$114.0 million in 2000 and \$113.3 million in 2001 compared with the value of trade in 1998. Products from Italy, France, Germany, and Denmark have been most affected by the tariffs. Although these totals do not isolate the effects of the retaliatory duties from other factors

such as changes in currency exchange rates, changes in supply and demand, or historical trade flows, the data show that retaliation appears to have effectively blocked trade at approximately the intended level.

According to the U.S. Customs Service, trade has been blocked by approximately 80 to 90 percent; a 100 percent block in retaliatory cases such as this is not expected because some commodities cannot be supplied domestically or by other countries of origin. Intuitively, the level of duties collected on the products to which the tariffs apply would be 100 percent of the import values reported in this paper. However, the current U.S. data collection system and potential reporting errors and updates do not support such a direct estimation of the actual duties collected on the imports (U.S. Customs Service 2002).

One criticism that has been leveled at the current system concerns the “carousel” provision enacted during the Clinton administration, which allows for scheduled changes in the dutiable product mix. This provision has never been implemented, and this is a common complaint among industry members and organizations against the current system. During the World Trade Organization (WTO) arbitration process, the European Union objected to carousel retaliation. In response to questions from the WTO arbitrators, the United States indicated that “[a]lthough nothing in the DSU [Dispute Settlement Understanding] prevents future changes to the list [of products subject to suspension] ... the United States has no current intent to make such change” (WTO 1999). The arbitrators then declined to consider the objection.

Another issue regarding the retaliation system is that some E.U. member states have increased exports of some of the country-targeted products. As noted, not all countries are targeted for all the listed products. Because customs data are collected based on country of origin, transshipments of targeted products would not affect the import data. Table A.4 shows the value of imports from E.U. member states of products for which the 100 percent ad valorem tariff applies only to other countries of origin. As shown, some countries have greatly increased the value of some products compared with the 1998 values. Although the total value of these imports declined by almost \$5.7 million, some countries were able to offset some of the trade value lost because of the retaliation duties by increasing exports of items that targeted other countries of origin.

Comparing 1998 with 2001, Denmark, Germany, Greece, Ireland, the Netherlands, and Portugal all showed an increase in exports of products for which duties were applied only to other countries of origin. Thus, the U.S. government has successfully blocked trade at about the appropriate level of retaliation, but it appears that some E.U. countries may have benefited, at least in part, from the country-specific duties.

Larger Retaliation for a Larger European Union?

Recently, some industry groups and legislators have proposed that the U.S. government seek to increase the total level of retaliation based on the loss of market access resulting from E.U. enlargement. As shown in Table 3, U.S. beef exports to the thirteen countries that applied for accession to the European Union totaled only 226 metric tons in 2001, down from a ten-year high of 5,404 metric tons in 2000. The total value of U.S. beef exports to applicant countries was nearly \$6 million in 2000 but decreased to \$966,000 in 2001. The current level of U.S. beef exports to these countries is very low and most will never become major markets, but U.S. exporters have been laying the groundwork to build these markets as economic conditions improve. With E.U. enlargement, the United States stands to lose both current and potential trade opportunities.

Preferential tariffs for free trade area partners (including the European Union) and implementation of sanitary and phytosanitary standards in preparation for E.U. accession have already blocked some U.S. trade in these countries, especially of pork and beef (USDA 2001a). Although Romania is less advanced in negotiations than are most of the other candidate countries, the Romanian government already has adopted a ban on hormone-treated beef. Poland plans to join the European Union in 2004 and will need to introduce all the veterinary and sanitary regulations used by the European Union no later than six to twelve months before accession. Imported U.S. beef and beef offal (mostly tripe) may need to be certified and slaughtered at E.U.-approved facilities sometime in 2003.

As shown in Table 4, the cumulative average value of U.S. beef and beef variety meat exports to the applicant countries has consistently been much lower than the average value of exports to the European Union. In 2001, the average value of U.S. beef exports to applicant countries was \$4,276 per metric ton, compared with \$6,320 per metric ton for U.S. beef exported to the European Union. Thus, the additional costs of providing non-hormone treated beef would close markets to U.S. exports and likely would reduce variety meat trade, as happened in the European Union.

As noted, the United States will lose market potential as the economies of applicant countries improve and beef demand increases. According to a European Commission report released earlier this year, “[R]ecent projections for the main commodities show that the candidate countries would be expected to somewhat increase their surplus production of cereals, oilseeds, and pigmeat until 2006 (in a status quo scenario without accession). Milk and beef production would be expected to decline, with many countries becoming net importers as consumer income and demand grows” (Commission of the European Communities 2002, p. 3). (The report refers to ten of the thirteen applicant countries and excludes Bulgaria, Romania, and Turkey.)

The report further states that, in joining the European Union’s Common Agricultural Policy, “[T]he main effects of the application of E.U. price policy in the candidate countries will be to encourage cereal production and discourage feed consumption. The effects on beef and dairy production are slightly positive, but not enough to cause a significant increase compared to current production levels . . . The major impact of direct payments on production would be a further shift towards coarse grains and a faster development of specialized beef production, subject to the suckler cow premium ceiling” (p. 3).

As stated, the countries joining the European Union represent very small markets for U.S. beef imports. These markets are highly responsive to price and exchange rate fluctuations, and transportation costs make the United States less competitive than the European Union and other countries supplying these markets. Of perhaps greater concern than losing these markets is that other countries will follow the E.U. lead against non-treated beef. For example, although China has not banned imports of hormone-treated beef, the Chinese government recently banned the use of growth-promoting hormones in the domestic industry. The USMEF reports that current and potential bans on hormone-

TABLE 4. U.S. beef variety meat exports to the 13 countries negotiating to join the European Union (metric tons)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Bulgaria	0	257	19	47	44	173	856	156	300	179
Estonia	0	46	0	2,031	693	62	758	2,149	1,721	0
Czech Republic	0	0	0	0	24	0	0	0	0	0
Hungary	539	237	639	312	565	349	47	0	0	24
Latvia	0	0	0	41	145	779	1,846	8,969	12,250	6,117
Lithuania	0	0	0	0	0	0	0	289	0	24
Malta and Gozo	0	0	0	0	0	0	38	0	0	0
Poland	1,975	1,931	2,800	5,400	9,250	6,260	7,032	9,896	5,586	5,259
Romania	19	231	3,115	1,590	371	695	1,038	813	361	1,099
Slovenia	17	42	20	0	0	0	0	0	0	0
Turkey	0	0	0	0	0	0	0	4	0	0
Total variety meats	2,551	2,774	6,592	9,421	11,092	8,318	11,615	22,276	20,218	12,701

Source: USDA 2002b.

Note: Only countries that imported U.S. beef between 1997 and 2001 are shown. The thirteen countries that have applied to join the European Union are Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia, and Turkey.

treated beef represent 40 percent of the world's beef-eating population (Seng 2002). Not all of the countries noted by the USMEF are major markets for U.S. beef, but the threat of other countries following the European Union's lead in opposition to the WTO ruling could have a significant impact on U.S. commodity beef exports. Further, unless NHTC beef can be provided more competitively, these markets will not become niche markets for non-treated beef.

Conclusion

The additional costs of producing and exporting non-hormone treated beef to the E.U. market prohibit all but a very small volume of trade. Prior trade relationships, willing E.U. buyers, and demand still exist, but the cost of U.S. beef has been too high to justify trade. Thus, complying with E.U. non-hormone treated regulations effectively blocks U.S. access to the 11,500 metric ton quota, and, as applicant countries adopt E.U. sanitary measures, E.U. expansion will increase the level of lost trade.

Because the E.U. market is so small, producers of certified non-treated beef have been forced to find other markets for their beef. Some producers are selling their cattle into U.S. natural beef markets at the standard premium, and some have obtained larger premiums from direct sales. However, the costs of the NHTC program require that producers obtain a larger premium for their non-hormone treated beef than do non-certified producers, all else being equal. Niche markets paying an additional premium for certified non-treated beef are relatively small and limited in number. However, growth in demand for natural beef (which many companies require to be non-hormone treated) indicates that more consumers are purchasing from this niche market.

Given the cost of exporting non-hormone treated beef and the relatively low value of current exports to countries attempting to join the European Union, E.U. expansion would close most of these markets to U.S. beef. These markets are relatively small, but the possibility of even more countries following the E.U. lead on banning treated beef could have significant implications for U.S. beef exports.

Endnotes

1. The duty for beef imported into the European Union under this quota is 20 percent.
2. Companies related to the original members can join for a \$10,000 fee.
3. The list of compounds for which testing is required (and other requirements for shipping meat to the European Union) is available at <http://www.fsis.usda.gov/OFO/export/euroreqs.htm>.

Appendix

Data Tables for U.S. Retaliation to the E.U. Hormone Ban

TABLE A.1. Products for which 100 percent ad valorem duties are applied.

HTS Description	
<i>Country of Origin: Austria, Belgium, Denmark, Finland, France, the Federal Republic of Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, or Sweden</i>	
0201	Meat of bovine animals, fresh or chilled
0202	Meat of bovine animals, frozen
02031100	Meat of swine (pork), fresh or chilled, carcasses and half-carcasses
02031210	Meat of swine (pork), fresh or chilled, hams and shoulders and cuts thereof, bone in, processed
02031290	Meat of swine (pork), fresh or chilled, hams and shoulders and cuts thereof, bone in, other
02031920	Meat of swine (pork), fresh or chilled, other, processed
02031940	Meat of swine (pork), fresh or chilled, other
02032100	Meat of swine (pork), frozen, carcasses and half-carcasses
02032210	Meat of swine (pork), frozen, hams and shoulders and cuts thereof, bone in, processed
02032290	Meat of swine (pork), frozen, hams and shoulders and cuts thereof, bone in, other
02061000	Edible offal of bovine animals, fresh or chilled
02062100	Edible offal of bovine animals, frozen, tongues
02062200	Edible offal of bovine animals, frozen, livers
02062900	Edible offal of bovine animals, frozen, other
04064020	Roquefort cheese, in original loaves, not grated or powdered, not processed
04064040	Roquefort cheese, other than in original loaves, not grated or powdered, not processed
07031040	Onions, other than onion sets or pearl onions not over 16 mm in diameter, and shallots, fresh or chilled
07095200	Truffles, fresh or chilled
07129010	Dried carrots, whole, cut, sliced, broken or in powder, but not further prepared
16022020	Prepared or preserved liver of goose
16022040	Prepared or preserved liver of any animal other than of goose
19054000	Rusks, toasted bread, and similar toasted products
20098060	Juice of any other single fruit (including cherries and berries), concentrated or not concentrated
21013000	Roasted chicory and other roasted coffee substitutes and extracts, essences and concentrates thereof
21033040	Prepared mustard
<i>Country of Origin: France, the Federal Republic of Germany, or Italy</i>	
20021000	Tomatoes, whole or in pieces, prepared or preserved otherwise than by vinegar or acetic acid
<i>Country of Origin: France or the Federal Republic of Germany</i>	
05040000	Guts, bladders and stomachs of animals (other than fish), whole and pieces thereof
21041000	Soups and broths and preparations thereof
55101100	Yarn (other than sewing thread) containing 85% or more by weight of artificial staple fibers, singles, not put up for retail sale

TABLE A.1. Continued.

HTS Description	
<i>Country of Origin: France</i>	
15059000	Fatty substances derived from wool grease (including lanolin)
18063100	Chocolate and other cocoa preparations, in blocks, slabs or bars, filled, not in bulk
20079905	Lingonberry and raspberry jams
02101100	Hams, shoulders and cuts thereof with bone in, salted, in brine, dried or smoked
35061050	Products suitable for use as glues or adhesives, NESOI, ^a not exceeding 1 kg, put up for retail sale

Source: Office of the U.S. Trade Representative.

^aNot elsewhere specified or indicated.

TABLE A.2. Customs value of E.U. products for which 100 percent ad valorem tariffs apply, by Harmonization Tariff Schedule code, 1998-2001 (U.S. dollars)^a

HTS Number	Country	1998^b	1999	2000	2001
0201 ^c —Meat of bovine animals, fresh or chilled					
(02013006)	Spain	0	0	5,286	0
	Total	0	0	5,286	0
0202 ^c —Meat of bovine animals, frozen					
(02023050)	Austria	0	0	116,924	0
(02023050)	Netherlands	0	0	0	186,822
	Total	0	0	116,924	186,822
02031100—Meat of swine (pork), fresh or chilled, carcasses and half-carcasses					
	Total	0	0	0	0
02031210—Meat of swine (pork), fresh or chilled, hams and shoulders and cuts thereof, bone in, processed					
	Denmark	2,039	14,491	2,046	0
	Italy	0	0	33,420	17,655
	Total	2,039	14,491	35,466	17,655
02031290—Meat of swine (pork), fresh or chilled, hams and shoulders and cuts thereof, bone in, other					
	Total	0	0	0	0
02031920—Meat of swine (pork), fresh or chilled, other, processed					
	Italy	0	0	0	23,483
	Finland	0	0	0	32,316
	Denmark	15,360	0	6,489	530,545
	Total	15,360	0	6,489	586,344
02031940—Meat of swine (pork), fresh or chilled, other					
	Belgium	55,038	0	0	0
	Denmark	0	194,859	81,343	0
	Italy	0	0	24,974	0
	Total	55,038	194,859	106,317	0
02032100—Meat of swine (pork), frozen, carcasses and half-carcasses					
	Total	0	0	0	0
02032210—Meat of swine (pork), frozen, hams and shoulders and cuts thereof, bone in, processed					
	Denmark	1,094,801	330,834	0	0
	Total	1,094,801	330,834	0	0
02032290—Meat of swine (pork), frozen, hams and shoulders and cuts thereof, bone in, other					
	Finland	166,084	0	0	0
	Ireland	101,762	109,503	0	0
	Denmark	16,928,642	5,737,128	38,153	561,280
	Total	17,196,488	5,846,631	38,153	561,280

TABLE A.2. Continued.

HTS Number	Country	1998^b	1999	2000	2001
02061000—Edible offal of bovine animals, fresh or chilled					
	Total	0	0	0	0
02062100—Edible offal of bovine animals, frozen, tongues					
	Total	0	0	0	0
02062200—Edible offal of bovine animals, frozen, livers					
	Total	0	0	0	0
02062900—Edible offal of bovine animals, frozen, other					
	Austria	0	0	0	39,917
	Total	0	0	0	39,917
02101100—Hams, shoulders and cuts thereof with bone in, salted, in brine, dried or smoked					
	France	805,134	1,531,081	0	0
	Total	805,134	1,531,081	0	0
04064020—Roquefort cheese, in original loaves, not grated or powdered, not processed					
	Denmark	0	0	0	8,791
	France	3,804,643	3,669,293	1,753,295	1,465,955
	Total	3,804,643	3,669,293	1,753,295	1,474,746
04064040—Roquefort cheese, other than original loaves, not grated or powdered, not processed					
	Italy	0	0	0	3,557
	France	613,513	382,034	303,315	236,291
	Total	613,513	382,034	303,315	239,848
05040000—Guts, bladders, and stomachs of animals (other than fish), whole and pieces thereof					
	France	1,527,824	847,399	0	7,824
	Germany	6,955,169	3,664,472	554,561	84,696
	Total	8,482,993	4,511,871	554,561	92,520
07031040—Onions, other than onion sets or pearl onions not over 16 mm in diameter, and shallots, fresh or chilled					
	Spain	164,634	180,646	0	0
	Italy	167,688	144,275	39,789	2,700
	Belgium	63,363	174,314	3,513	24,689
	France	5,837,538	6,657,030	1,036,734	644,238
	Netherlands	2,090,950	752,685	359,642	873,019
	Total	8,324,173	7,908,950	1,439,678	1,544,646
07095200—Truffles, fresh or chilled					
	Spain	19,028	20,246	0	19,945
	France	1,068,293	959,388	103,446	38,774
	Italy	3,419,676	1,142,909	92,421	160,272
	Total	4,506,997	2,122,543	195,867	218,991
07129010—Dried carrots, whole, cut, sliced, broken, or in powder, but not further prepared					
	Austria	92,306	29,600	0	0
	Ireland	172,438	0	0	0
	Netherlands	1,659,010	1,135,715	14,980	0
	Germany	663,064	470,265	72,095	153,966
	France	2,331,097	1,125,579	412,803	459,869
	Total	4,917,915	2,761,159	499,878	613,835
15059000—Fatty substances derived from wool grease (including lanolin)					
	France	205,962	359,116	0	0
	Total	205,962	359,116	0	0

TABLE A.2. Continued.

HTS Number	Country	1998 ^b	1999	2000	2001
16022020—Prepared or preserved liver of goose					
	Germany	0	0	3,163	0
	France	1,336,984	1,477,994	560,367	526,878
	Total	1,336,984	1,477,994	563,530	526,878
16022040—Prepared or preserved liver of any animal other than goose					
	Belgium	68,591	2,217	0	0
	Germany	2,190	23,472	0	0
	Denmark	0	33,036	0	0
	France	316,279	1,205,953	207,710	155,057
	Total	387,060	1,264,678	207,710	155,075
18063100—Chocolate and other cocoa preparations, in blocks, slabs, or bars, filled, not in bulk					
	France	1,467,125	1,135,727	127,872	722,418
	Total	1,467,125	1,135,727	127,872	722,418
19054000—Rusks, toasted bread, and similar toasted products					
	Finland	128,550	0	0	0
	Portugal	10,117	13,887	0	0
	Belgium	4,986	16,161	0	9,249
	Sweden	560,939	32,448	70,418	20,346
	Germany	1,322,346	349,767	303,565	142,728
	Italy	2,920,597	1,912,861	382,613	242,734
	France	882,166	766,477	442,338	284,880
	Netherlands	445,524	571,235	496,751	362,311
	Greece	987,841	334,622	27,291	433,459
	Spain	640,073	578,281	372,345	576,648
	Total	7,903,139	4,575,739	2,095,321	2,072,445
20021000—Tomatoes, whole or in pieces, prepared and preserved otherwise than by vinegar or acetic acid					
	France	59,268	0	0	0
	Italy	21,244,550	11,954,239	283,072	133,347
	Total	21,303,818	11,954,239	283,072	133,347
20079905—Lingonberry and raspberry jams					
	France	680,181	744,463	58,459	46,392
	Total	680,181	744,463	58,459	46,392
20098060—Juice of any other single fruit (including cherries and berries), concentrated or not concentrated					
	Denmark	504,313	120,000	0	0
	Greece	49,280	9,448	0	0
	Finland	169,690	0	0	0
	Sweden	109,800	54,900	0	0
	Portugal	0	3,305	0	15,394
	Spain	200,879	275,133	0	23,634
	Italy	1,717,665	813,297	243,715	85,363
	Germany	9,235,493	9,836,936	61,132	97,145
	Netherlands	1,293,219	2,613,537	26,422	127,160
	Belgium	2,612,248	1,811,055	2,098	138,614
	Austria	9,184,373	6,216,894	218,385	170,879
	France	315,440	163,847	125,831	178,844
	Total	25,392,400	21,918,352	677,583	837,033
21013000—Roasted chicory and other roasted coffee substitutes and extracts, essences, and concentrates thereof					
	Italy	84,120	139,273	6,488	0
	Netherlands	39,292	8,251	7,813	0
	Belgium	344,022	39,401	37,781	2,676
	Portugal	51,772	34,403	30,748	22,919
	Germany	1,448,133	947,526	54,423	26,802

TABLE A.2. Continued.

HTS Number	Country	1998 ^b	1999	2000	2001
	France	1,783,433	1,398,221	943,648	891,279
	Total	3,750,772	2,567,075	1,080,901	943,676
21033040—Prepared mustard					
	Austria	7,301	0	0	0
	Ireland	9,212	33,380	2,687	2,169
	Netherlands	44,383	32,347	7,953	4,003
	Italy	6,948	0	0	4,587
	Sweden	14,878	3,483	5,250	4,766
	Belgium	8,869	0	25,956	58,509
	Denmark	72,622	102,730	62,400	69,276
	Germany	267,877	122,389	66,040	116,819
	France	4,840,740	5,358,979	3,340,757	3,241,466
	Total	5,272,830	5,653,308	3,511,043	3,501,595
21041000—Soups and broths and preparations thereof					
	France	587,009	687,525	289,812	370,130
	Germany	4,639,150	2,796,586	1,051,654	1,032,714
	Total	5,226,159	3,484,111	1,341,466	1,402,844
35061050—Products suitable for use as glues or adhesives, NESOI, ^d not exceeding 1 kg, put up for retail sale					
	France	2,449,280	1,422,100	353,058	241,831
	Total	2,449,280	1,422,100	353,058	241,831
55101100—Yarn (other than sewing thread) containing 85 percent or more by weight of artificial staple fibers, singles, not put up for retail sale					
	Germany	2,498,238	1,078,947	145,403	6,889
	France	1,798,519	979,358	22,086	46,095
	Total	4,296,757	2,058,305	167,489	52,984
Grand Total		129,491,561	87,888,953	15,522,733	16,213,122
Change from Calendar Year 1998 to Calendar Year 2000: \$113,968,828					
Change from Calendar Year 1998 to Calendar Year 2001: \$113,278,439					

Source: U.S. International Trade Commission.

^aU.S. imports for consumption.

^b1998 was the last full year before the tariffs were implemented.

^cProducts classified in any eight-digit subheadings under this four-digit heading are subject to 100 percent duties.

^dNot elsewhere specified or indicated.

TABLE A.3. Customs value of E.U. products by county of origin for which 100 percent ad valorem tariffs apply, 1998-2001 (U.S. dollars)^a

Country	HTS Number	1998	1999	2000	2001
Austria	02023050	0	0	116,924	0
	02062900	0	0	0	39,917
	07129010	92,306	29,600	0	0
	20098060	9,184,373	6,216,894	218,385	170,879
	21033040	7,301	0	0	0
	Austria Total	9,283,980	6,246,494	335,309	210,796
Belgium	02031940	55,038	0	0	0
	07031040	63,363	174,314	3,513	24,689
	16022040	68,591	2,217	0	0
	19054000	4,986	16,161	0	9,249
	20098060	2,612,248	1,811,055	2,098	138,614
	21013000	344,022	39,401	37,781	2,676

TABLE A.3. Continued.

Country	HTS Number	1998	1999	2000	2001
	21033040	8,869	0	25,956	58,509
	Belgium Total	3,157,117	2,043,148	69,348	233,737
Denmark	02031210	2,039	14,491	2,046	0
	02031920	15,360	0	6,489	530,545
	02031940	0	194,859	81,343	0
	02032210	1,094,801	330,834	0	0
	02032290	16,928,642	5,737,128	38,153	561,280
	04064020	0	0	0	8,791
	16022040	0	33,036	0	0
	20098060	504,313	120,000	0	0
	21033040	72,622	102,730	62,400	69,276
	Denmark Total	18,617,777	6,533,078	190,431	1,169,892
Finland	02031920	0	0	0	32,316
	02032290	166,084	0	0	0
	19054000	128,550	0	0	0
	20098060	169,690	0	0	0
	Finland Total	464,324	0	0	32,316
France	02101100	805,134	1,531,081	0	0
	04064020	3,804,643	3,669,293	1,753,295	1,465,955
	04064040	613,513	382,034	303,315	236,291
	05040000	1,527,824	847,399	0	7,824
	07031040	5,837,538	6,657,030	1,036,734	644,238
	07095200	1,068,293	959,388	103,446	38,774
	07129010	2,331,097	1,125,579	412,803	459,869
	15059000	205,962	359,116	0	0
	16022020	1,336,984	1,477,994	560,367	526,878
	16022040	316,279	1,205,953	207,710	155,075
	18063100	1,467,125	1,135,727	127,872	722,418
	19054000	882,166	766,477	442,338	284,880
	20021000	59,268	0	0	0
	20079905	680,181	744,763	58,459	46,392
	20098060	315,440	163,847	125,831	178,844
	21013000	1,783,433	1,398,221	943,648	891,279
	21033040	4,840,740	5,358,979	3,340,757	3,241,466
	21041000	587,009	687,525	289,812	370,130
	35061050	2,449,280	1,422,100	353,058	241,831
	55101100	1,798,519	979,358	22,806	46,095
	France Total	32,710,428	30,871,564	10,081,531	9,558,239
Germany	05040000	6,955,169	3,664,472	554,561	84,696
	07129010	663,064	470,265	72,095	153,966
	16022020	0	0	3,163	0
	16022040	2,190	23,472	0	0
	19054000	1,322,346	349,767	303,565	142,728
	20098060	9,235,493	9,836,936	61,132	97,145
	21013000	1,448,133	947,526	54,423	26,802
	21033040	267,877	122,389	66,040	116,819
	21041000	4,639,150	2,796,586	1,051,654	1,032,714
	55101100	2,498,238	1,078,947	145,403	6,889
	Germany Total	27,031,660	19,290,360	2,312,036	1,661,759
Greece	19054000	987,841	334,622	27,291	433,549
	20098060	49,280	9,448	0	0
	Greece Total	1,037,121	344,070	27,291	433,549

TABLE A.3. Continued.

Country	HTS Number	1998	1999	2000	2001
Ireland	02032290	101,762	109,503	0	0
	07129010	172,438	0	0	0
	21033040	9,212	33,380	2,687	2,169
	Ireland Total	283,412	142,883	2,687	2,169
Italy	02031210	0	0	33,420	17,655
	02031920	0	0	0	23,483
	02031940	0	0	24,974	0
	04064040	0	0	0	3,557
	07031040	167,688	144,275	39,789	2,700
	07095200	3,419,676	1,142,909	92,421	160,272
	19054000	2,920,597	1,912,861	382,613	242,734
	20021000	21,244,550	11,954,239	283,072	133,347
	20098060	1,717,665	813,297	243,715	85,363
	21013000	84,120	139,273	6,488	0
	21033040	6,948	0	0	4,587
	Italy Total	29,561,244	16,106,854	1,106,492	673,698
	Netherlands	02023050	0	0	0
07031040		2,090,950	752,685	359,642	873,019
07129010		1,659,010	1,135,715	14,980	0
19054000		450,199	573,930	496,751	362,311
20098060		1,293,219	2,613,537	26,422	127,160
21013000		39,292	8,251	7,813	0
21033040		44,383	32,347	7,953	4,003
Netherlands Total		5,572,378	5,113,770	913,561	1,553,315
Portugal	19054000	10,117	13,887	0	0
	20098060	0	3,305	0	15,394
	21013000	51,772	34,403	30,748	22,919
	Portugal Total	61,889	51,595	30,748	38,313
Spain	02013006	0	0	5,286	0
	07031040	164,634	180,646	0	0
	07095200	19,028	20,246	0	19,945
	19054000	640,073	578,281	372,345	576,648
	20098060	200,879	275,133	0	23,634
	Spain Total	1,024,614	1,054,306	377,631	620,227
Sweden	19054000	560,939	32,448	70,418	20,346
	20098060	109,800	54,900	0	0
	21033040	14,878	3,483	5,250	4,766
	Sweden Total	685,617	90,831	75,668	25,112
Grand Total		129,491,561	87,888,953	15,522,733	16,213,122

Source: U.S. International Trade Commission.

^aU.S. imports for consumption.

TABLE A.4. Customs value of products by E.U. country of origin for which 100 ad valorem tariffs apply only to other countries of origin, 1998-2001 (U.S. dollars)^a

Country	HTS Number	1998	1999	2000	2001
Austria	02101100	0	0	0	2,415
	18063100	161,180	272,119	196,230	2,156,521
	20079905	207,167	217,465	202,946	158,864
	35061050	0	8,143	0	2,476
	55101100	12,465,147	9,049,780	7,452,356	2,887,136
	Austria Total	12,833,494	9,547,507	7,851,532	5,207,412
Belgium	05040000	0	21,647	83,283	0
	15059000	373,110	701,892	1,519,748	1,424,963
	18063100	2,328,511	2,471,273	1,768,286	1,337,393
	20079905	55,216	156,684	640,903	662,976
	21041000	155,293	0	4,103	7,466
	35061050	76,094	62,948	123,564	157,609
	55101100	1,177,341	99,374	241,228	498,033
	Belgium Total	4,165,565	3,513,818	4,381,115	4,088,440
Denmark	05040000	10,947,759	11,497,736	12,978,740	11,747,035
	18063100	83,784	150,815	300,784	72,904
	20079905	665,020	1,020,305	432,985	487,299
	21041000	0	9,358	0	79,488
	35061050	1,295	0	475,517	482,056
	Denmark Total	11,697,858	12,678,214	14,188,026	12,868,782
Finland	05040000	228,689	9,798	34,285	0
	18063100	109,612	108,598	384,355	238,488
	20079905	31,137	31,489	26,212	26,807
	55101100	175,598	0	0	0
	Finland Total	545,036	149,885	444,852	265,295
Germany	15059000	1,525,206	1,246,765	884,898	1,478,521
	18063100	13,150,555	11,533,757	16,052,627	24,023,515
	20079905	292,846	164,975	180,252	218,867
	35061050	14,556,930	7,767,136	6,881,763	5,647,222
	Germany Total	29,525,537	20,712,633	23,999,540	31,368,125
Greece	05040000	36,143	0	0	0
	18063100	0	6,094	2,007	76,682
	20021000	0	0	4,709	12,506
	20079905	0	33,879	24,754	96,235
	21041000	0	0	29,713	0
	55101100	8,653	0	0	0
	Greece Total	44,796	39,973	61,183	185,423
Ireland	02101100	27,457	0	0	0
	05040000	0	0	169,479	0
	18063100	110,005	92,599	73,930	35,235
	20079905	10,114	14,165	2,640	5,208
	21041000	121,072	104,379	124,949	69,083
	35061050	4,656,943	6,084,905	6,800,422	6,263,943
	Ireland Total	4,925,591	6,296,048	7,171,420	6,373,469
Italy	02101100	547,930	1,329,108	557,978	288,437
	05040000	0	149,425	137,524	91,948
	15059000	159,566	359,028	193,510	155,971

TABLE A.4. Continued.

Country	HTS Number	1998	1999	2000	2001
	18063100	1,583,649	571,208	771,751	1,059,310
	20079905	11,469	17,917	70,249	48,009
	21041000	529,901	258,984	139,535	88,006
	35061050	47,395	1,384,188	761,333	296,700
	55101100	930,481	1,684,460	1,005,580	354,899
	Italy Total	3,810,391	5,754,318	3,637,460	2,383,280
Netherlands	05040000	1,800,941	707,759	1,951,816	2,194,555
	15059000	95,329	198,316	139,082	74,634
	18063100	57,655	414,366	715,843	458,960
	20079905	0	6,878	45,653	39,483
	21041000	136,011	78,467	223,582	66,345
	35061050	614,826	97,291	222,625	410,686
	55101100	0	0	0	55,000
	Netherlands Total	2,704,762	1,503,074	3,298,601	3,299,663
Portugal	05040000	1,217,054	933,674	1,203,474	981,258
	18063100	26,928	18,437	27,224	14,520
	20021000	0	0	0	6,560
	21041000	173,444	139,675	175,405	171,322
	35061050	21,633	0	2,400	0
	55101100	17,852	785,211	757,494	670,936
	Portugal Total	1,456,911	1,876,997	2,165,997	1,844,596
Spain	02101100	155,010	1,024,786	2,201,858	379,493
	05040000	0	0	2,714	381,785
	18063100	80,718	112,445	191,360	259,479
	20021000	3,423,000	1,403,067	271,775	585,964
	20079905	0	46,138	5,452	21,023
	21041000	64,427	454,909	423,785	465,097
	35061050	18,212	181,415	427,184	143,676
	55101100	469,588	3,095,999	2,980,423	1,735,141
	Spain Total	4,210,955	6,318,759	6,504,551	3,971,658
Sweden	05040000	1,735,784	791,057	391,085	0
	18063100	24,900	30,571	66,988	219,072
	20079905	455,115	666,085	566,920	443,834
	21041000	11,750	31,270	20,848	12,575
	35061050	173,281	69,794	166,507	34,746
	55101100	0	35,512	48,881	68,510
	Sweden Total	2,400,830	1,624,289	1,261,229	778,737
Total, All Countries		78,321,826	70,015,515	74,965,506	72,634,880

Source: U.S. International Trade Commission.

^aU.S. imports for consumption.

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