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After the Ban: The Japanese Market for U.S. Beef

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Abstract

In the months following the reopening of the Japanese market to imports of U.S. beef on July 26, 2006, Japanese importers were unable to procure adequate supplies. This paper discusses reasons for early supply shortages and some of the policy and trade issues that will affect demand for U.S. beef in the short to medium term. The paper also discusses current marketing efforts for domestic and imported beef, new marketing technologies, and general consumer trends. The information presented in this paper includes on-site observations and data from meetings with Japanese importers and retailers and industry experts during market research in Tokyo and Osaka in November 2006.

Keywords

age verification, beef traceability, food safety, Japan, marketing

Disciplines

Agribusiness | Agricultural and Resource Economics | Agricultural Economics | International Business | International Economics

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After the Ban: The Japanese Market for U.S. Beef

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Executive Summary

In the months following the reopening of the Japanese market to imports of U.S. beef on July 26, 2006, Japanese importers were unable to procure adequate supplies. This paper discusses reasons for early supply shortages and some of the policy and trade issues that will affect demand for U.S. beef in the short to medium term. The paper also discusses current marketing efforts for domestic and imported beef, new marketing technologies, and general consumer trends. The information presented in this paper includes on-site observations and data from meetings with Japanese importers and retailers and industry experts during market research in Tokyo and Osaka in November 2006.

Keywords: age verification, beef traceability, food safety, Japan, marketing.

AFTER THE BAN: THE JAPANESE MARKET FOR U.S. BEEF

Introduction

Japanese consumers are among the world's most demanding in their expectations for safety, quality, taste, and value in the food products they purchase. Reminding these consumers that U.S. beef meets all these criteria and rebuilding demand after a two-and-a-half-year absence from the market will require careful marketing, safety assurances, rebuilding of trade relationships—and adequate supplies. In the months following the reopening of the Japanese market to U.S. beef, importers were expressing frustration that they were unable to obtain enough U.S. beef to meet demand, even at the very low volumes needed for a slowly expanding, very cautious market.

Perhaps with good reason, the shortage of eligible beef caught some industry participants by surprise. Following the December 2003 ban on U.S. beef after confirmation of a single case of bovine spongiform encephalopathy (BSE) in the United States, the Japanese government conducted their side of negotiations to reopen their market to U.S. beef in a politically charged environment under strong criticism from political opponents, the Japanese media, and consumer groups. Numerous surveys were published indicating that the majority of Japanese consumers would be unwilling to purchase U.S. beef when it reentered the market. Negative reports about the safety of U.S. beef and the U.S. export verification system gained steam when the market reopened on December 11, 2005, only to close again on January 20, 2006, after prohibited bovine materials were found in a shipment of U.S. veal. To some, Japanese reaction to the discovery of the banned materials seemed disproportionate to the event. But the Japanese government was facing harsh criticism from opponents claiming that the U.S. system was not failsafe and did not adequately protect Japanese consumers. Political opponents accused Japan's prime minister, Shinzo Abe, of prioritizing political considerations rather than basing decisions in science, ignoring the safety of consumers, and moving too quickly to accept U.S. beef (CIDRAP 2006). From the U.S. perspective, the Japanese government was acting with

extreme caution by insisting on stringent regulations and moving slowly to accept imports of U.S. beef.

Following another six months of negotiations and inspection of U.S. plants by Japanese officials, the Japanese market was again reopened to U.S. beef on July 26, 2006. Given the negative political and media focus on U.S. beef prior to the market reopening, it is not surprising that Japanese consumers were expressing caution about purchasing U.S. beef and that most supermarkets did not immediately carry U.S. beef. A survey conducted in mid-July 2006 revealed that only 1 of the 21 major food companies that responded planned to use U.S. beef immediately when the market reopened (USDA 2006d).

Once U.S. beef began to reach Japanese consumers, however, the Japanese media began to report on the strong acceptance of U.S. beef by some consumers. Costco and Zenshoku Co. received wide coverage for being the first supermarket and restaurant chain, respectively, to offer U.S. beef following the ban (*Mainichi Daily News* 2006). On September 18, Yoshinoya D&C Co. sold one million servings of gyudon (“beef bowl”) made with U.S. beef in just 10 hours before running out of U.S. beef. Newspapers reported that some customers had waited in long lines for Yoshinoya restaurants to open that day (*China Daily* 2006, USDA 2006d). These early reports of consumer confidence in U.S. beef were supported by results from taste tests in Japanese supermarkets and other venues where Japanese consumers eagerly sampled U.S. beef.

Rebuilding U.S. beef export volume to pre-ban levels will be a long process, but these initial successes were important signals to the Japanese consumers who were waiting to see what other consumers would do, and to the Japanese restaurateurs and retailers who were waiting to see whether their customers would accept U.S. beef. The successes also revealed that Japanese importers wanted more U.S. beef than was being supplied.

Now that U.S. beef has returned to the Japanese market, a variety of forces will drive demand, some of which will change over the next several months and some of which will affect beef imports into the foreseeable future. This paper discusses the market environment shortly after the ban was lifted and some of the domestic policies, trade policies, consumer issues, and marketing efforts that will affect supply and demand of domestic and imported beef in Japan in the near to medium term. The paper includes information

from on-site observations, meetings with Japanese importers and retailers, and meetings with Japanese and U.S. industry experts during market research in Tokyo and Osaka in November 2006.

Rebuilding U.S. Beef Exports to Japan

As noted, importers were unable to obtain desired quantities of U.S. beef shortly after the Japanese market reopened to U.S. beef, even at the very low volumes needed for a highly cautious market. From August to December 2006, the United States exported 12,264 metric tons (product weight) of beef to Japan. The total volume that might have been exported if the supply of eligible beef had been unlimited is unknown, but more beef could have been shipped. Japanese importers who began purchasing beef immediately when the ban was lifted in July were unable to obtain enough, and importers who waited to judge consumer acceptance before importing found themselves struggling to fill supply chains. Many factors contributed to low overall exports of U.S. beef to Japan, but the initial shortage when the market opened was being attributed to a lack U.S. fed beef from cattle produced under a documented age verification program.

Age Verification

Current Japanese regulations require that U.S. beef be harvested from animals 20 months of age or younger at the time of slaughter (USDA 2006f). Age can be verified by enrolling calves in a USDA-approved Quality System Assessment (QSA) program or Process Verified Program, or cattle can be determined to be of A⁴⁰ physiological maturity or younger by an official USDA evaluation using the U.S. Standards for Carcass Beef and the description of maturity characteristics within A maturity. In a 2005 study to determine the relationship between chronological and physiological age of U.S. fed beef, USDA estimated that the mean age of U.S. fed cattle at harvest was about 16 to 17 months and that 97 percent of U.S. fed cattle were being harvested before 20 months of age (USDA 2005a). However, only about 5 percent of U.S. fed cattle had documentation proving chronological age. The study also found that an A⁴⁰ maturity score for U.S. carcasses ensures the beef is harvested from an animal 20 months of age or younger, but the A⁴⁰ score is such a conservative measure of physiological age that less than 8 percent of the cattle in the study's dataset produced carcasses with a maturity score of A⁴⁰ or

younger. Thus, at the time of the study, the U.S. industry had a low percentage of carcasses that would potentially qualify for Japan under either method.

Other factors further reduced the volume of eligible beef when the market reopened in July 2006. As part of the USDA Export Verification (EV) program for beef to Japan, Japanese government officials inspected and approved 34 U.S. packing facilities to export beef to Japan. However, not all qualified cattle are harvested at one of the approved packing facilities, and not all the approved facilities began exporting beef to Japan. Industry experts estimated that between 2 and 3 percent of U.S. beef could potentially qualify for export to Japan when U.S. beef was allowed re-entry in July 2006. Thus, although the United States is producing vast quantities of the age and type of beef demanded by the Japanese market, Japanese importers have been unable to source enough eligible beef.

The percentage of U.S. cattle that can achieve A⁴⁰ maturity scores would be expected to show little variation, but producers will control the number of cattle enrolled in approved age verification programs. In 2007, more beef is expected to become available, as higher numbers of animals enrolled in approved QSA programs or Process Verified Programs become ready for harvest. However, to meet Japanese preferences for documentation, reliable supply, and specific cuts, the U.S. industry will need to continue to increase production of eligible beef.

Japanese importers seeking to assure their buyers and end-users about the safety of U.S. beef prefer documented age verification because “there is no story with A⁴⁰ beef.” The story about how and where meat is produced is an important marketing tool in Japan and will continue to be important even if regulations on imported U.S. beef eventually are relaxed. Further, during the time that U.S. beef was banned from their market, Japanese importers had the time and incentive to develop strong relationships with exporters from other countries. In particular, Australian exporters worked hard to try to meet Japanese demand for both grass-fed and grain-fed beef. Assurances of reliable supplies from the United States will help encourage importers to re-establish former trade relationships with the U.S. industry. Further, prior to the 2003 ban on U.S. beef, Japan imported 5 percent of total U.S. production by volume, but the cuts making up this volume came

from a much larger share of U.S. cattle (Peterson and Fox 2004). The ability to provide only specific cuts to Japan will continue to be a major advantage for the U.S. industry.

As the first six-month verification period for the U.S. export verification program for beef to Japan neared an end, the Japanese government declined a USDA request to engage in discussions about changing the age limit of cattle from which beef can be harvested. The Japanese government indicated that it will conduct a second audit, confirm the audit results, and make the results public before considering changes to the current system. Discussions about changing the age limit will take place eventually. But, if the negotiations over reopening the market can serve as an indication, it could take a great deal of time before the U.S. and Japanese governments reach agreement. And, given that such a change would require a change in Japanese legislation, considerable time likely will elapse before any agreed-upon change would be implemented.

During the Japanese beef ban, U.S. producers had reason for caution as they considered whether to invest in the age verification programs required under the USDA EV program for beef to Japan, and the types of tags and technologies to use. For both processors and producers, the immediate reclosure of the market as soon as the problem occurred in the veal shipment confirmed the risk of early reentry, as hundreds of metric tons of beef were returned or held in frozen storage at the port in Japan. Further, given that the Japanese market was closed to U.S. beef for so long, there has been no transmission of price signals to indicate that Japanese market prices will support the additional costs of animal identification programs.

In the months since the July 2006 market reopening, the Japanese government has demonstrated a willingness to work with the U.S. industry, and the import process appears to be operating relatively smoothly. The longer the market is open, the more the concerns on both sides should diminish. U.S. presence in the market is expected to be strongest in the restaurant and food service sector first (for example, beef bowl restaurants) and then to gain strength in the retail sector. As discussed next, however, several other factors will affect potential supply and demand for U.S. beef in Japan.

Inspection of U.S. Beef at Japanese Customs

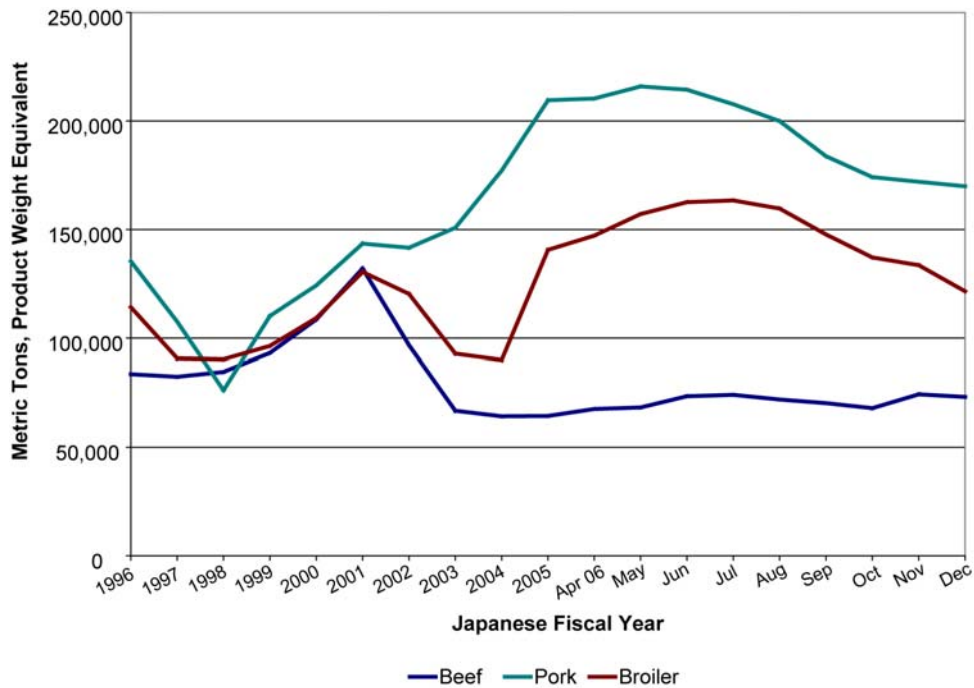
The requirement that 100 percent of U.S. beef be inspected for specified risk materials at the port of entry created additional cost, paperwork, and labor for importing U.S.

beef relative to Japanese imports from most other countries. Documentation must be submitted to both the Ministry of Agriculture, Forestry, and Fisheries and the Ministry of Health, Labor, and Welfare. Every box of U.S. beef must be opened and every package must be visually inspected. The system is time-consuming and adds considerable cost, which is paid by the importing company. Inspection costs include labor, cold storage, accessing and moving boxes, and rental of space for inspection. Various industry sources estimated these costs at between ¥100 and ¥200 (about \$0.85 to \$1.70) per box, and at about \$800 per container load. The extra time the beef must be held at the port also reduces the days of shelf life available to the retailer or end user.

Shortly after the ban was lifted, importers found that 100 percent inspection limited import volume because of the overwhelming time and labor necessary to open and examine every box. And, although the process reportedly has become smoother as companies and government personnel have adjusted to the required protocol, 100 percent inspection will continue to act as a major hurdle for U.S. beef in Japan. In January 2006, as the first six-month verification period for imports of U.S. beef neared an end, Japanese officials reportedly were considering relaxing the 100 percent inspection requirement, a move supported by both the U.S. industry and Japanese importers. A reduction in the percentage of meat requiring inspection at the port would reduce time and costs at the port and signal greater trust in the U.S. export verification program, both of which will be important to increasing demand in Japan.

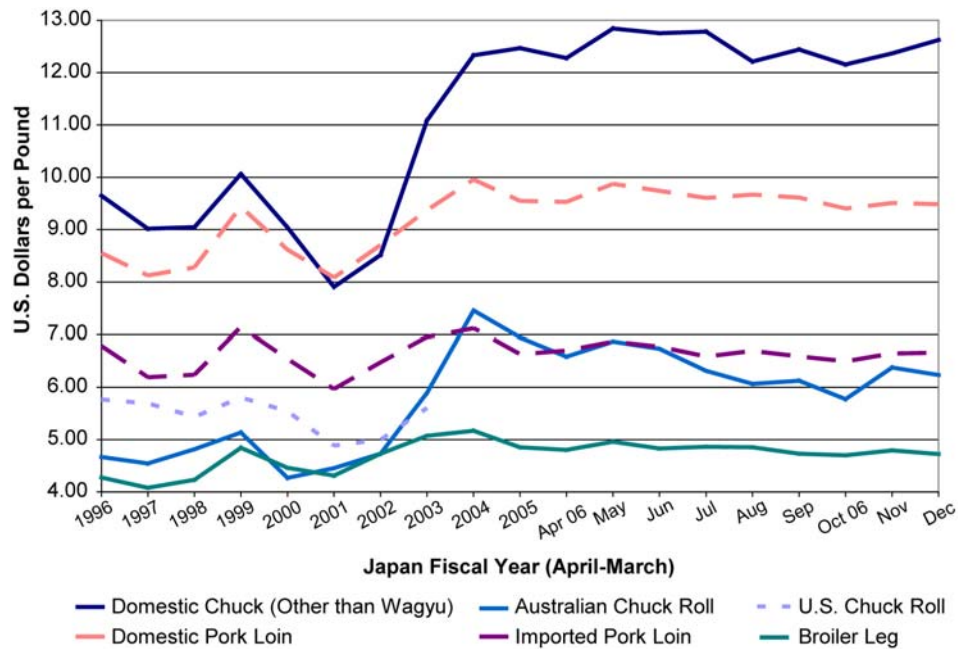
World Prices

Reentry of U.S. beef in Japan in mid-2006 coincided with high beef prices. As shown in Figure 1, beef stocks in Japan declined significantly following the ban on U.S. beef and have not recovered. Ending stocks of pork and broiler meat were drawn down initially by unexpected increases in demand, but these markets recovered and stocks were well above pre-ban levels by mid-2006. Changes in beef prices have moved in the opposite direction. As shown in Figures 2 and 3, import, domestic carcass, and retail prices for beef increased dramatically after the ban on U.S. beef and have remained above



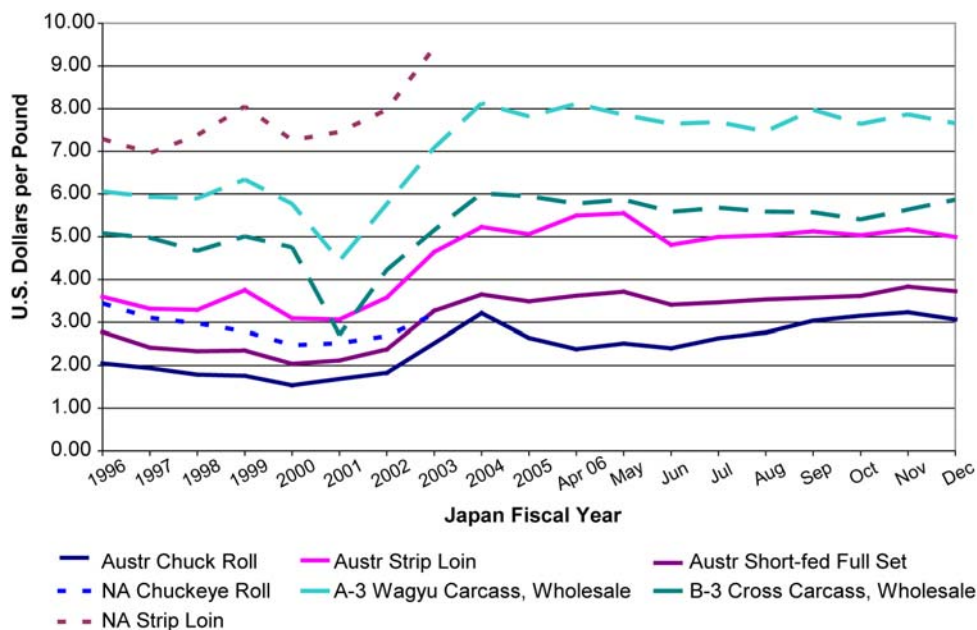
Source: ALIC 1999-2006.

FIGURE 1. Estimated ending stocks of beef, pork, and broiler meat in Japan, JFY1996 – JFY2005 and April-December 2006



Source: ALIC 1999-2006.

FIGURE 2. Retail prices of beef, pork, and broiler meat in Japan, JFY1996 – JFY2005 and April-December 2006



Source: ALIC 1999-2006.

FIGURE 3. Japan traders' prices of imported beef and wholesale prices of domestic carcasses, FJY1996 – JFY2005 and April-December 2006.

pre-ban levels. The average retail prices for imported pork and broiler meat (leg) increased immediately following the ban on beef but moved back toward pre-ban levels as stocks increased.

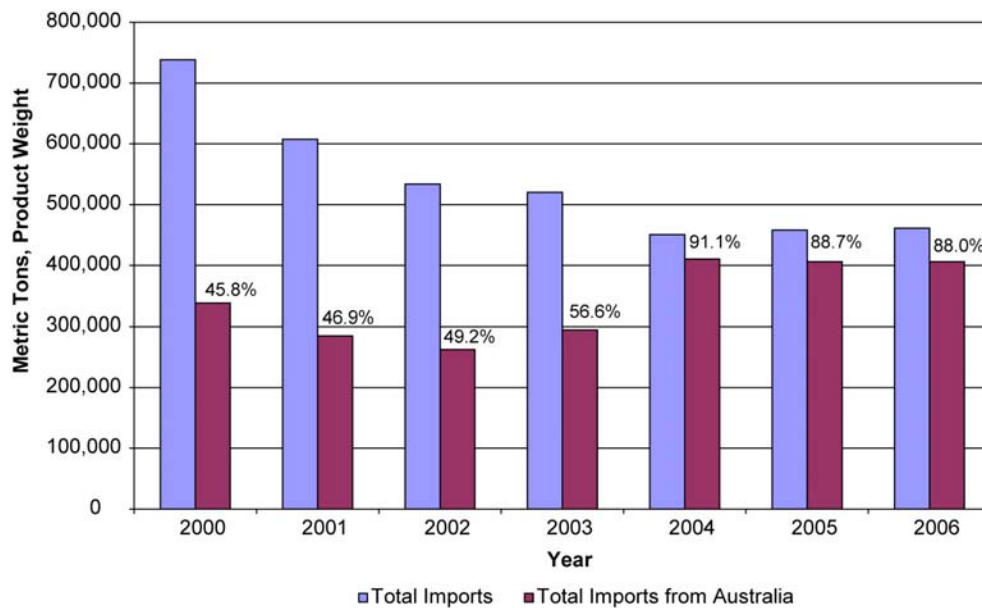
Importers report that the same Japanese consumer may purchase several types of beef, with selection based more on a specific occasion than on price. In addition to selecting beef for a specific occasion, Japanese consumers look for value (high quality at a good price). Thus, on different days, the same consumer may purchase domestic Kobe beef, which sells for about U.S.\$192.26/lb. in department stores, and imported strip loin, which sells for around U.S.\$11.57/lb. in supermarkets (prices observed in November 2006). And, although Japanese consumers are not as price sensitive as consumers in many other export markets, sustained high beef prices since early 2004 have dampened consumer demand for beef.

In December 2006, a survey by the Japan Food Service Association revealed that less than 30 percent of companies that had used U.S. beef prior to the 2003 ban were currently using U.S. beef, and the non-users were citing high prices as a primary reason (USDA 2007b). This response indicates that, in addition to high overall market prices, the extra

costs of complying with Japan’s regulations and inspection protocols are reducing the competitiveness of U.S. beef relative to beef from countries without BSE-related import regulations, such as Australia and New Zealand. In addition, Japanese importers have expressed a high level of concern over the potential impact of the developing U.S. biofuels industry on prices of U.S. red meats and on their ability to procure enough U.S. beef at prices that will allow greater import volumes. The relative cost of U.S.-sourced beef and its perceived value on the part of importers and consumers will be an ongoing factor in the ability of U.S. beef to increase market share.

Competition from Australia

Australia dominated the Japanese beef import market during the U.S. industry’s absence (see Figure 4). Between 2003 and 2005, Australia’s share of Japan’s total beef needs increased from 32 to 52 percent. And, between 2003 and 2006, Australian feedlot capacity increased by 25 percent (MLA 2006b, 2006c). By January 2007, Australia had about 881,000 head of cattle on feed, or about 3 percent of the Australian beef herd. Despite these increases, Australian producers were unable to fully supply the volume of beef demanded in Japan and the type of beef that had been supplied by the United States.



Source: ALIC various dates.

FIGURE 4. Percentage of Japanese beef imports supplied by Australia, 2000-2006

Historically, the major limitation to the size of the Australian beef industry and its ability to sustain feedlot production has been weather. In 2006, weather played a major role in beef production, as many regions suffered from extended drought conditions. Producers were forced to slaughter cattle they could not feed or to feed grain in lieu of grass, and poor growing conditions contributed to dramatically higher grain prices at a time of high demand. By October 2006, the price of sorghum had increased by 83 percent, feed wheat by 83 percent, feed barley by 71 percent, and feed oats by 153 percent, compared with prices in November 2005 (MLA 2006b). USDA expects the Australian industry to continue to increase feedlot capacity, but limited feed-grain supplies and high prices will pressure cattle producers and other grain users to find new sources of grain (USDA 2007a, p. 5). By December 2006, Biosecurity Australia had completed a risk analysis and recommended “that imports of wheat from selected sites in Canada and the United Kingdom and sorghum and corn from U.S. selected [areas] be allowed, subject to strict quarantine conditions, including processing at AQIS [Australian Quarantine and Inspection Service] approved facilities in metropolitan areas” to help ease the shortage (USDA 2006a). Still, shortfed beef output may decline in 2007.

Australian cattle slaughter from June 2006 to July 2007 is expected to reach 9 million head (up 7 percent from the 2005-06 period). This higher slaughter will cause the beef herd to decline by 2 percent, which will then “constrain subsequent herd expansion activity” (ABARE 2006). Beef production in 2007 is expected to total 2.1 million metric tons, about 4 percent lower than the 2006 level. Then, production is expected to remain below the 2006 level until 2009 (MLA 2007). Given continued high cattle slaughter rates in Australia, the slow start to U.S. beef exports, and continued restrictions on U.S. beef, Australia will continue to enjoy market dominance in Japan over the short to medium term but gradually will begin to lose market share to U.S. grain-fed beef.

Despite the advantage of having no diagnosed cases of BSE, Australia’s success in Japan is not solely the result of lack of competition from the United States. A strong dependence on beef exports underlies the Australian industry’s responsiveness to its export markets. Japanese importers respect this responsiveness to themselves as customers, the reliability of Australian suppliers, the Australian animal identification system, and the quality of Australian short-fed and grass-fed product. As one Japanese importer

noted, domestic beef and Australian beef largely satisfied consumers' requirements while U.S. beef was out of the market, and the U.S. industry will need to work to insert its beef back into Japan.

The Australian industry did not take its market dominance for granted, especially as U.S. reentry into the market approached. Meat and Livestock Australia (MLA) continued to conduct creative and aggressive beef marketing campaigns. During 2006, for example, MLA collaborated with Wolf Blass Winery and Qantas Airways to conduct a "Travel to Australia" promotion to commemorate 2006 as Japan-Australia Friendship Year. An estimated 4,000 Japanese retailers participated in the program, which included free trips to Australia (USDA 2006d). Other marketing efforts have included MLA presentations at elementary schools in Japan to discuss the features of Australian beef and the industry's safety control system, with Australian beef served at school lunches (USDA 2006d).

Japan's Beef Safeguard Mechanism

Until Japan Fiscal Year 2006 (JFY2006, April 1, 2006 through March 31, 2007), the Japanese government consistently enforced its beef safeguard provision to protect the domestic industry against large increases in fresh and frozen beef imports, measured on a quarterly basis. Japan last enforced the safeguard provision and increased tariffs from August 1, 2003, through March 31, 2004. The discovery of BSE in Japan's domestic cattle herd had caused a sharp decline in imports, and the safeguard was triggered as imports recovered (USDA 2006b). These higher safeguard tariffs overlapped the beginning of the ban on U.S. beef, implemented in December 2003.

The BSE-based bans on Canadian and U.S. beef, implemented in May and December 2003, respectively, created another sharp decline in imports, and resumption of imports during FY2006 had the potential to trigger the beef safeguard at a time of declining stocks and increasing prices relative to pre-ban levels. In a one-time departure from normal practice, the Japanese Ministry of Agriculture, Forestry, and Fisheries (MAFF) enacted the 2006 Temporary Tariff Measures Law to modify the normal safeguard mechanism. For JFY2006, the base period for triggering a safeguard action was changed to the average of total beef imports for JFY2002 and JFY2003, when imports were much higher than during JFY2005 (the normal base period).

The second ban on U.S. beef (January 20 to July 26, 2006) limited the amount of U.S. beef that entered Japan in JFY2006, resulting in another low safeguard trigger for JFY2007. As the beginning of JFY 2007 approached, the Japanese beef market continued to experience shrinking stocks, high prices, and reduced consumption. In response, Japan's MAFF recommended an extension of the JFY2006 temporary measure. The recommendation is expected to obtain approval by the Japanese legislature and would go into effect on April 1, 2007 (USDA 2006b).

Table 1 shows preliminary calculations of the safeguard trigger levels for the first three quarters in JFY2007. Higher duties are imposed if beef imports exceed an average of JFY2002-2003 levels or 117 percent of the previous year's imports, whichever is higher. Extending the JFY2006 temporary measure would allow an additional 6,830 metric tons of chilled beef to be imported before the safeguard is triggered in the first quarter. However, the trigger level for frozen beef during the first quarter is higher under the normal method of calculation than under the extended temporary measure, so Japan will use the higher level. By the third quarter, an additional 27,574 metric tons of chilled beef and an additional 33,761 metric tons of frozen beef could be imported (April-September cumulative basis) before the safeguard is triggered.

TABLE 1. Japan fiscal year 2007 beef safeguard trigger levels if temporary measure is extended

	Actual Imports JFY2006	Trigger under Normal Method	Trigger under Extended Temporary Measure
	(Metric Tons, Customs Clearance Basis)		
1st Quarter (April-June)			
Chilled Beef	57,700	65,709	74,339
Frozen Beef	67,073	78,475	78,475 ^a
2nd Quarter (April-September) ^b			
Chilled Beef	111,133	130,026	152,455
Frozen Beef	121,306	141,928	160,040
3rd Quarter (April-September) ^b			
Chilled Beef	173,562	203,068	230,642
Frozen Beef	182,145	213,110	246,871

Source: USDA 2006b, 2006c, 2007c, and author calculations.

^aThe trigger level for the normal method (78,475 metric tons) is higher than under the temporary measure (70,716 metric tons). In such cases, the higher volume applies.

^bQuarterly trigger volumes are cumulative.

Under the higher trigger levels and with no change in the restrictions for importing U.S. beef, it is unlikely the safeguard will be triggered during JFY2007. However, if the safeguard is triggered in any quarter, beef tariffs will increase from 38.5 to 50 percent and will remain at 50 percent for the remainder of the fiscal year.

BSE Testing

The first case of BSE was confirmed in Japan in September 2001. By the time the Japanese market opened to U.S. beef in mid-2006, 29 cases of BSE had been found in the domestic herd, and by the end of 2006, the total had reached 31 cases. After the first case of BSE was confirmed, the Japanese government required that all domestic cattle be tested at the time of slaughter, regardless of age. In August 2005, Japan revised the regulation to require that cattle 21 months of age or older be tested, a step that was necessary to allow reentry of Canadian and U.S. beef. However, industry sources report that the Japanese federal government has continued to cover the costs to test all cattle. Average testing costs have been estimated at about \$31 per head. Based on the USDA estimate of 1.220 million cattle and calves slaughtered in 2006, the estimated total testing cost would be approximately \$37.8 million (Matibag, Igarashi, and Tamashiro 2005; *Science* 2004). Peterson and Fox (2004) estimated BSE screening costs to be between 2 and 15 percent of Japan's annual BSE budget.

Because of universal testing, most Japanese consumers believe that domestic beef is safer than beef imported from a country where BSE has been found but that does not test all cattle. Despite the lack of scientific justification for universal testing, the Japanese system has been an effective tool for rebuilding and retaining consumer confidence in the domestic beef supply, even as the number of domestic BSE cases increases. Industry experts report that voluntary testing of animals less than 21 months of age will be turned over to prefectural governments, but the federal government will continue to pay testing costs for both mandatory and voluntary testing. Because universal testing is so valuable to consumer confidence and assurance, it seems likely that such testing will continue into the foreseeable future.

Food Safety and Traceability

Food safety tops the list of long-term consumer concerns that will drive food demand in Japan, and most Japanese consumers can afford to purchase the products they believe

offer the greatest safety. Industry experts in Japan note that many U.S. food products have an image problem in Japan and are perceived on a par with products from countries such as China and Burma in terms of safety and quality. This image problem can be attributed in large part to major differences in consumer perceptions about food safety and the greater degree of risk aversion on the part of Japanese consumers compared with their North American counterparts.

The USDA's "Food Business Line" for Japan (available at <http://www.fas.usda.gov/scripts/attacherep/default.asp>) provides reports of the many ways retailers are addressing Japanese concerns through food safety and consumer assurance programs. In the meat industry, for example, SQF (Safe Quality Food) certification based on, "the international strict food safety and quality management standards started in Australia," has become popular among meat companies (USDA 2006d). And, as noted, telling the story of the origin, production methods, and any special attributes of both domestic and imported meats is an important customer assurance tool in supermarkets.

A recent study on consumer risk perceptions, funded by Canada's National Beef Industry Development Fund, found that about 80 percent or more of consumers in Canada and the United States considered beef a safe product to consume, compared with 60 percent of consumers in Mexico and only 48 percent of consumers in Japan (USDA 2007d). And, as noted, Japanese consumers also have less confidence in imported beef than in domestic beef. A 2006 survey indicated that safety is the primary consideration for consumers when they purchase beef and that 80 percent of consumers worry about the safety of imported beef. Japanese consumers also want assurances that the beef they purchase is suitable for consumption by their family and children and that there is no need to worry about BSE (MLA 2006a).

After BSE was discovered in the domestic herd in 2001 and several food-related scandals called the safety, quality, and origin of food products into question, traceability became an important tool in assuring Japanese consumers about the source of their foods. A previous paper describes the Japanese traceability system for cattle and the use of 10-digit animal identification numbers that consumers can use to obtain production information about beef via in-store or home computers (Clemens 2003). Now, cell phone technology allows producers and consumers to connect to the Internet to obtain the

production history on any beef animal via cell phone. Using the animal's ear tag ID number, a feedlot producer could check a calf's production history prior to purchasing a feeder animal at a sale, or a wholesaler could quickly check the production history of a carcass. Using the ID number on the product label, the consumer can check production history at the supermarket. As with BSE testing, this highly accessible traceability system helps maintain consumer confidence in domestic beef.

Although U.S. beef had established a good reputation for taste and quality prior to the ban, the image of U.S. beef suffered from the discovery of BSE and the subsequent veal shipment with specified risk materials. Japanese importers believe that traceability would greatly increase the marketability of U.S. beef. These importers acknowledge that a system identical to the Japanese system may not be practical for most U.S. producers, but they note that traceability would be a highly desirable attribute for U.S. beef, even for small groups of cattle and to single producers, if not to individual animals. As noted, an important reason Japanese buyers want traceability is because it allows them to document the "story" of how the meat was produced. In-store marketing efforts that tell these stories continue to be very popular in Japan, and point-of-sale information may include information about the livestock producers, origin of the livestock, rations, and any special production methods (for example, organic, no subtherapeutic antibiotics). This use of production information has been especially popular in marketing chilled domestic meats, but exporting countries (examples were observed for Australian beef and Canadian pork) are providing supermarket signage to inform Japanese consumers about imported meat as well.

Adopting an International BSE Risk Standard

To regain access to the beef markets in several importing countries, the United States has been forced to develop individual EV programs with most countries.¹ Recently, Japan announced plans to conduct risk evaluations of beef from 13 countries, reportedly in response to concerns about increasing imports of beef from Chile and Mexico.

¹ As of January 26, 2007, USDA listed beef or bovine EV programs for Canada, Columbia, Costa Rica, Egypt, Hong Kong, Japan, Korea, Lebanon, Mexico, Peru, Russia, Singapore, Taiwan, Thailand, and Vietnam and an EV program for countries that require that imports of U.S. beef be harvested from cattle less than 30 months of age.

Adoption of an international standard for BSE risk assessment and surveillance by importing and exporting countries would eliminate the need for EV programs tailored to the standards and regulations demanded by each importer. Agreement to observe an international BSE risk standard would also help prevent the proliferation and enforcement of nonscientific standards. The World Organization for Animal Health (OIE, or Office International des Épizooties) has developed a set of recommendations for assessing risk status, conducting surveillance, and managing human and animal health risk during trade. The United States is suggesting that importers of U.S. beef use the OIE standard.

Under the OIE standard, BSE risk status is determined through a two-pronged risk assessment (see Table 2). Based on the risk assessment and level of BSE surveillance practices within a country, that country's risk status would be determined as negligible, controlled, or undetermined. To achieve negligible risk status, for example, a country must demonstrate that ruminant meat and bone meal has not been fed to ruminants for at least eight years and that any indigenous BSE cases were in animals born more than 11 years ago (see OIE 2006 for specific conditions of each risk status). Then, based on the specific risk status, the OIE standard provides recommendations for the certifications and restrictions that importing countries would require from the exporting country.

The OIE risk standard recommends acceptance of skeletal muscle meat from cattle 30 months of age or older (with restrictions on stunning method) and surveillance for subpopulations of cattle that are 30 months of age or older (OIE 2006). A negligible or controlled risk status is contingent upon being able to trace cattle. For example, the OIE standard states that "all BSE cases, as well as

- all cattle which, during their first year of life, were reared with the BSE cases during their first year of life, and which investigation showed consumed the same potentially contaminated feed during that period, or
- if the results of the investigation are inconclusive, all cattle born in the same herd as, and within 12 months of the birth of, the BSE cases,

if alive in the country, zone, or compartment, are permanently identified, and their movements controlled, and, when slaughtered or at death, are completely destroyed" (OIE 2006).

TABLE 2. OIE BSE risk assessment and surveillance criteria

- Two-pronged Risk Assessment
 - Release Assessment
 - Presence of absence of the BSE agent in the indigenous ruminant population
 - Production of MBM or greaves^a
 - Imported MBM or greaves
 - Imported cattle, sheep, and goats
 - Imported animal feed and feed ingredients
 - Imported products of ruminant origin for human consumption
 - Imported products of ruminant origin intended for *in vivo* use in cattle
 - Exposure Assessment
 - Recycling and amplification of BSE agent—cattle consuming ruminant-origin MBM or greaves or feed contaminated with these
 - Use of ruminant carcasses, by-products and slaughterhouse waste, parameters of rendering processes, methods of feed manufacture
 - Level BSE surveillance and surveillance results
 - Ongoing awareness program for industry participants to encourage recognition and reporting of all cases showing clinical signs
 - Compulsory notification and investigation of all cattle showing clinical signs
 - Examination of brain or other tissue in approved laboratory
-

Source: OIE 2006.

Note: Condensed from http://www.oie.int/eng/normes/mcode/en_chapitre_2.3.13.htm.

^a MBM is meat and bone meal; greaves refers to the protein-containing residue obtained after the partial separation of fat and water during rendering.

Following a U.S. request for a risk assessment, the OIE is recommending that the United States receive controlled risk status. This recommendation will be voted on by OIE member countries in May 2007. Given that the Japanese government is not yet willing to consider easing the age restriction on U.S. beef, it seems unlikely that Japan will accept the OIE's recommendations for trade with the United States as a controlled risk status country in the near future.

Other Market Factors

Free Trade Agreements and Economic Partnership Agreements

Japan imports 60 percent of its food supply (on a calorie basis), and the 40 percent produced domestically is primarily rice. Under current economic and policy conditions, Japan may have difficulty retaining even 40 percent self-sufficiency. Few young people are entering farming, and 58 percent of commercial farmers are 65 years of age or older (MIAC 2006). USDA estimates that the average farm operation in Japan is between 2 and

13 hectares (5 to 33 acres) in size. Proposals for land reform, corporate agriculture, and programs to encourage young people and retirees to enter farming have been suggested, but no formal action has been taken. And, even with extensive agricultural reform, Japan must continue to import much of its supply of food.

Japan relies on the United States for 31 percent of its food imports, the EU-15 for 14 percent, China for 12 percent, and Australia for 10 percent. To help ensure a safe and secure food supply, Japan is aggressively pursuing bilateral and multilateral free trade agreements and economic partnership agreements (EPAs). Table 3 shows some of the countries that have reached a trade agreement with Japan or are participating in negotiations.

TABLE 3. Status of Japan's negotiations for free trade/economic partnership agreements

FTA Partner	Status
ASEAN ^a	Negotiations underway
Australia	First round of negotiations to begin April 2007
Brunei	Basic agreement December 2006
Chile	Basic agreement November 2006
GCC ^b	Preliminary meetings May 2006
India	Joint Governmental Study launched in 2005
Indonesia	Agreement in Principle November 2006
Malaysia	Entered into force July 13, 2006
Mexico	Entered into force April 1, 2005
Philippines	Signed September 2006, approved by Parliament
Republic of Korea	Negotiations underway
Singapore	Entered into force November 30, 2002
Switzerland	Joint Governmental Study launched October 2005
Thailand	Text finalized June 2006
Vietnam	Agreement to launch negotiations signed October 2006

Source: MOFA 2007.

Note: More information is available at <http://www.mofa.go.jp/policy/economy/fta/index.html> and <http://www.mofa.go.jp/policy/economy/fta/effort.pdf>.

^aThe Association of South East Asian Nations (ASEAN) encompasses the 10 South East Asian countries of Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

^bThe Gulf Cooperation Council encompasses Bahrain, Oman, Qatar, Saudi Arabia, United Arab Emirates, and Kuwait.

As noted in the Joint Study of an EPA with Australia, raising Japan's food self-sufficiency ratio, "ensuring stable and reliable food imports and maintaining multi-functionality of agriculture are important policy objectives of Japan. Japan aims to ensure stable and reliable food imports through diversifying food supply sources and maintaining relations with major food exporting countries" (MOFA 2006, pp. 6-7). Agriculture is a sensitive issue in these negotiations because Japan continues to have a relatively well-protected domestic sector and will be highly reluctant to offer large, if any, tariff reductions in some areas. The Joint Study states that "more than half the agricultural products imported from Australia are sensitive items such as rice, wheat, barley, sugar, dairy products and beef ... and tariff elimination of these sensitive items would have a serious effect. Japan, therefore, has been applying exceptional measures for these sensitive items in other EPA negotiations. We cannot conclude an FTA with Australia, if it includes tariff elimination of these sensitive products" (MOFA 2006, p. 22).

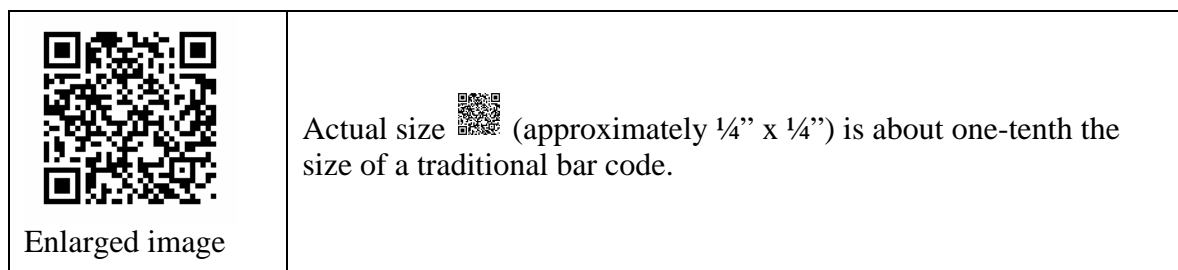
However, Japan has made some concessions regarding meat. In an FTA (free trade agreement) with Mexico, for example, Japan established a tariff rate quota (TRQ) for Mexican pork starting at 38,000 metric tons (product weight) in JFY2005 and increasing to 80,000 metric tons for JFY2009. The agreement sets the tariff on Mexican pork at 2.2 percent (down from 4.3 percent) and does not count in-quota imports against the safeguard trigger level calculation (USDA 2005b). The agreement also includes beef. Japan's FTA with Chile also includes TRQs for pork (increasing from 32,000 metric tons in Year 1 to 60,000 metric tons in Year 5) and small TRQs for beef and some beef variety meats.

Although export volumes from Mexico and Chile are small relative to U.S. and Australian exports, the former two countries are increasing their market presence for beef and pork. In 2005, Mexico exported 35,189 metric tons of pork and 6,740 metric tons of beef to Japan. In the same year, Chile exported 51,717 metric tons of pork and 2,942 metric tons of beef to Japan (USDA 2006e). Mexico's desire to increase beef exports to Japan was also demonstrated by a well-organized presence at FOODEX Japan 2006, Japan's largest annual food show.

New Retail Technologies

Japanese consumers embrace electronic technologies. A relatively new marketing tool in the Japanese food retail sector is the Quick Response (QR) code on product packaging (see Figure 5). Developed by a Japanese company in 1994, the QR code is a type of two-dimensional bar code that can store up to 7,089 numeric characters or 4,296 alphanumeric characters in less space compared to a conventional bar code, which can store approximately 20 digits (QR Code.com n.d.). QR codes are being used in a broad range of applications, including retail packaging. To read a QR code on a package in a supermarket, the customer must have a cell phone camera equipped with QR-code-compatible software and Internet connection capabilities. The cell phone is used to scan the QR code from the product package, and the information stored in the code is transferred to the cell phone. If the code contains a URL, the consumer can then immediately connect to the Internet to receive product information and coupons via the cell phone. Alternatively, the QR code can be stored on the phone or forwarded to a computer for access at a later time.

Anecdotal evidence indicates that cell phone–Internet connectivity heavily targets young people, and adoption of this technology has been fastest among this group. However, QR codes are coming into wider use in a variety of applications. Examples include signage in public areas (subway trains, for example) where large numbers of consumers could scan the QR code as they pass by, in print advertisements (such as magazines), and on business cards.



Source: Wikipedia n.d.

FIGURE 5. Example of a matrix-type QR code that might be used on retail packaging to provide electronic information to consumers.

QR codes are being used by some companies in the Japanese meat industry. In November 2006, QR codes were found on processed products produced by Itoham. The QR code for an Itoham product linked the consumer to information about the product and its ingredients, recipes and instructions on how to cook the product, and suggestions on how to display the prepared food product. Information was also provided about the company, retail promotions, and other Itoham products, and a telephone number was provided for consumer inquiries. A QR code was also observed for a promotion pairing a Japanese beer and ham. The consumer could scan the QR code on the bottom of the beer package and connect to the Internet to discover what reward (a coupon, for example) was being offered for purchasing both beer and ham. In cases where coupons are offered, a bar code is scanned from the cell phone screen at the supermarket checkout counter.

Another new technology is not yet widely used in Japan but has many potential applications in the food industry. This technology allows for automated (non-spam) mailing of information to cell phones. Consumers opt to receive information by connecting their cell phone to a computer at a retail site. Contact information for the cell phone is stored electronically so that, after the consumer leaves the retail site, product information, consumer surveys, and time-sensitive coupons can be automatically sent to the cell phone.

Marketing to Changing Consumer Demographics

Several demographic and cultural trends will affect the amount and type of beef that will be imported into Japan over the long term. The Japanese population is contracting and aging. The declining population means an end to automatic growth in overall food imports based on population growth, but opportunities are emerging for prepared and value-added foods, new products, and the introduction or adaptation of existing products that had not previously entered the market. In response to the aging population, one large convenience store chain will open stores that will cater specifically to older shoppers by carrying Japanese teas and traditional foods and creating an appealing shopping environment. Japanese consumers are strongly health-conscious, and as the general population ages, information about the specific benefits of foods for maintaining or improving health are becoming increasingly important.

Japanese consumers may embrace technology in many aspects of daily life, but they are more conservative when it comes to using some types of technology in food produc-

tion. Attitudes against using genetically modified organisms as food ingredients are well-documented, and consumers express preferences for “natural,” “hand-made” foods. Anecdotal evidence suggests that consumers would be unlikely to accept “high-tech foods” such as meat harvested from cloned animals or produced through selection of genetic markers, even if the resulting benefit is greater nutritional value. Evidence of the stated preference for foods perceived as natural is reflected on supermarket and convenience store shelves that carry food products labeled as natural or organic, in addition to a wide array supplements, beauty aids, and enhanced foods advertised to improve the health and beauty of consumers.

Women remain the primary target of many food marketing campaigns because traditionally they have done most of the family shopping. More recently, the growing number of women in the workplace has led to increased popularity of home replacement meals and ready-to-eat prepared foods. On the other hand, the number of women customers at major convenience stores has declined in recent years. The same convenience store that will open stores catering to older shoppers has launched a campaign that targets women and “supports raising children” (USDA 2006d).

An important result of such changes is the emergence of specialized niche markets that offer differentiated products targeted to increasingly specific consumer groups. High quality, safety, traceability, branding, and documented production methods will be some of the attributes required to fill these niche markets for meats and other food products.

Conclusion

Japan is a challenging import market, but the rewards of exporting beef to Japan are large. In 2003, the value of U.S. beef exports to Japan exceeded \$1.15 billion. The Japanese ban on imports of U.S. beef following the discovery of BSE in the United States in December 2003 allowed Australia to become the dominant foreign beef supplier, as the domestic industry continued to rebuild consumer confidence by implementing a national animal identification program with full traceability and universal BSE testing. At the same time, the Japanese consumer’s already strong focus on food safety intensified, and retailers have worked with suppliers to develop programs to assure consumers that they are purchasing safe, high-quality beef.

The U.S. beef industry has established a reputation in Japan for good quality at a reasonable price. However, that image suffered serious damage from the discovery of BSE and the subsequent discovery of specified risk materials in a shipment of U.S. veal. Despite strong consumer demand in outlets such as beef bowl restaurants after the ban on U.S. beef was lifted in July 2006, most consumers and retailers were highly cautious about purchasing U.S. beef, and initial import volumes were low. The slow start to imports of U.S. beef can be attributed to a combination of factors, including caution in the marketplace, lack of age-verified animals, rigorous inspection requirements, and overall high beef prices that have dampened demand. For the most part, changes in this import environment are expected to occur slowly, and the U.S. industry must work to re-establish itself as a major supplier.

Relaxation of the 100 percent inspection requirements would reduce the cost of importing U.S. beef, and this change is expected to occur in the short term. Increasing or removing the age requirement for U.S. cattle would have an even greater impact, but this change is likely to take much longer. Japan's emphasis on FTAs and EPAs is creating a diverse group of food suppliers and creating advantages for small but increasing quantities of beef and competing meats for some exporters. As these changes occur, Japanese importers believe that increased use of animal identification and traceability systems by U.S. producers will make U.S. beef more competitive. The domestic industry and some competing suppliers are providing documentation that importers can use to communicate safety assurances, product attributes, and quality. This information is increasingly being required by food processors and retailers, who are responding to current consumer demand, anticipating new food trends as a result of changing demographics, and communicating product information to consumers using innovative technologies. As these retailers target highly specific consumer groups, the Japanese market will increasingly favor products that can supply these niche markets over commodity products.

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