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**THE JAPANESE BEEF MARKET FOLLOWING  
THE START OF TRADE LIBERALISATION IN JUNE 1988**

by

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## **I Japanese Beef Market Access Agreement of 1988**

The Beef Market Access Agreement (BMAA) was signed between the governments of Japan and the United States and Australia in June 1988.

Japan agreed: (1) to replace import quotas and the involvement of the Livestock Industry Promotion Corporation (LIPC), a quasi-government agency, in beef imports and 25 per cent tariff by higher tariffs, commencing in the Japanese fiscal year (JFY) 1991, starting 1 April 1991: 70 per cent in JFY 1991, 60 per cent in JFY 1992 and 50 per cent in JFY 1993 and thereafter; (2) to increase import quotas by 60 kilo tonnes (kt) every year during the three year phasing-out period of JFY 1988 to 1990 from 214 kt in JFY 1987; (3) to expand the percentage of simultaneous-buy-sell (S/B/S) system in the LIPC tender from 10 per cent in JFY 1987 to 30 per cent, 45 per cent and 60 per cent in JFY 1988, 1989 and 1990, respectively.

The US and Australia agreed that Japan could impose a 25 emergency tariff on top of regular tariff where beef imports threaten to increase drastically to disrupt the domestic beef market<sup>1</sup>.

## **II Developments in the Japanese Beef Import Market During the Three Year Phasing-Out Period**

- (1) Actual beef imports increased from 224 kt in JFY 1987 to 285, 364 and 383 kt, boneless primal cut weight, in JFY 1988, 1989 and 1990, respectively.
- (2) Increases in imports of chilled beef, in particular, were significant, ie: 80, 121 and 150 kt in JFY 1988, 1989 and 1990, respectively from 61 kt in JFY 1987.
- (3) Imports became diversified with respect of beef types, cuts etc to meet the requirements of Japanese end-users: Australia increased grain-fed beef exports to Japan from less than 4 kt in 1987 to 6, 22, 32 and 46 (forecast) kt in calendar years 1988, 1989, 1990 and 1991, respectively; imports of beef from longer grain-fed cattle (200 to 300 days) became significant; imports of grain-fed beef from North America in chilled form increased dramatically from 7 kt in JFY 1987 to 12, 23 and 29 kt, boneless weight in JFY 1988, 1989 and 1990, respectively; the number of beef items transacted under S/B/S increased from approximately 30 in the past to 172 in the latter half of JFY 1990, showing a diversifying trend in the types of beef imported.
- (4) Beef stocks held by LIPC and the private sectors increased drastically in the 1989 from 66 kt on April 1 to 119 kt on December 1 in the same year, with most of the increases in beef imports in 1990 contributing to inventory. Beef inventory levelled off at the 1990 level to be carried over to JFY 1991, the post-liberalisation period. It has been alledged that retail prices of imported beef have not been reduced to match substantial decline in wholesale prices of imported beef. This could have caused a build-up of frozen beef stocks, thereby exerting downward pressures on wholesale prices.

- (5) Wholesale prices of almost all imported beef cuts rose appreciably in the first year of the phasing-out period but eroded significantly in the second and third years and short-run price fluctuations became more intense than before with the easing of the LIPC intervention. To take a few examples, nakama sobas (purveyors' prices) in the Tokyo area of silver side and US square cut chuck rose from 830 and 900 yen per kg in the first quarter of 1988 to 1,150 and 1,350 yen per kg in the last quarter of the same year but plunged into 850 and 830 yen per kg, respectively in the first half of 1990. Those of chilled (grass-fed) full sets steadily fell from 1,750 yen per kg in the first half of 1988 to 1,450 yen in the second half of 1989 and dropped further down to 1,200 yen per kg in the latter half of 1990. Details are shown in Table 5.
- (6) The wholesale prices of domestic beef were generally firm until the end of 1989 despite drastically weak market conditions for imported beef by then. The wholesale prices of the higher grades of Wagyu beef by comparison rose gradually by 10 per cent or so during the three year period but those of dairy beef became weaker in the latter half of 1990 and those of the lower grades of dairy beef, dairy culls in particular, dropped by more than 50 percent in 1990.

#### 111 Short-term Prospects in the Japanese Beef Market after the Removal of Quotas

- (1) Most studies on the Japanese beef market have predicted that beef imports would continue to increase by sizable amounts immediately following the removal of quotas. Anderson et al predicted that imports would more than double once quotas removed; a group of researchers at Iowa State University, Meat Export Research Centre (MERC), have been predicting that imports would increase from 400 kt in 1990 to 657 kt in 1991 when import quotas are replaced by 70 per cent tariff; Ohga, a noted researcher in the Japanese Government Research Institute of Agricultural Economics, once predicted that imports would increase by the average annual rate of 18 per cent through 1995 after liberalisation; one Japanese trade source predicted that imports would increase by 20 per cent in 1991, the first year of post-liberalisation and by 15 per cent annually in 1992 and 1993 (Table 5).
- (2) As of January 1992, most trade sources, both in Japan and in exporting countries, seem to agree that imports for JFY 1991 would not exceed 350 kt, 12 per cent less than the quota for the last year of pre-liberalisation era. The wholesale prices of almost all imported beef cuts have been below pre-liberalisation levels and most beef traders, both in Japan and exporting countries, are reported to have been incurring heavy financial losses. Our estimates of rates of protection for the post-liberalisation period seem to substantiate these reports (Figures 3-4). The prices of domestic Wagyu beef except for cow culls have been firm and those of domestic dairy beef, middle grade or up have not been severely affected. However the market for the lower grades of dairy beef have not recovered from devastated conditions in the previous year.

#### IV Possible Causes for Wrong Predictions

- (1) The basic cause underlying the over-estimates of beef import potential, has been the failure to properly recognise that beef is far from a single homogeneous product in Japan. It is something like aggregating apples and oranges into one category, and estimating the demand for fruits by using cheaper prices of imported oranges. This approach may be misleading in estimating the demand for fruits to the extent that these two products are not homogeneous with each other. Let us investigate into the case of Japanese beef imports.
- (2) Hayami assumed in his often referred paper, "Trade Benefits to All: A Design of the Beef Import Liberalisation in Japan" that chilled grain-fed beef from the United States is the same in quality as domestic fed dairy beef which is better in quality than imported grass-fed beef and can command higher prices by 30 to 40 per cent. He recognised the segments of Japanese beef market but assumed that beef in these segments can be safely aggregated into one category 'beef' with some simple modifications for quality differences.

Anderson found that imported beef as a whole was better in quality than domestic fed dairy beef but could be equated for practical purposes without modification. Longworth assumed that frozen grain-fed beef imported from the US was comparable with Wagyu beef except for 'super beef' such as Kobe beef and that chilled grass-fed beef from Australia was comparable with domestic dairy beef, medium grade to constitute 'popular beef'. Ohga once assumed that imported grain-fed beef from the US was identical with domestic dairy beef, medium grade to constitute the most important segment of the Japanese beef market in addition to Wagyu beef. However, he later modified his simulation by introducing the fixed ratios of wholesale prices of domestic dairy beef to imported grain-fed beef, ranging from 1.0 to 1.2 and 1.4. Researchers at MERC Iowa State University aggregated all imported beef and domestic dairy beef into 'import quality' beef.

The Japanese Ministry of Agriculture, Forestry and Fisheries has been consistently using a single, aggregated demand function to estimating future demand for beef and define import requirements as total demand minus domestic production.

- (3) Improper aggregation of beef or insufficient disaggregation of it in the Japanese market may give rise to serious overestimation of import requirements after the removal of quotas. Suppose the own price elasticity of demand is around unity and imports account for  $1/3$  of the total consumption at the outset. The wholesale prices of domestic and imported beef are supposed to be nearly the same for the sake of simplicity and twice as high as import international prices due to import regulations to start with. After complete liberalisation, the wholesale prices of domestic and imported beef would fall to one half of the current level and the total demand would double under the homogeneous product assumption. If the domestic production remains the same due to some sort of deficiency payment, import requirements would increase four fold from  $1/3$  to  $4/3 = (2.0 - 2/3)$ . However, under the apples (domestic beef) and oranges (imported beef) assumption, the projected outcome would be entirely different, ie imports could only double from  $1/3$  to  $2/3$  as wholesale prices of domestic beef would not be affected by a 50 per cent fall in imported beef prices. Total consumption of beef would be  $4/3 = (2/3 + 1/3 \times 2)$  instead of 2. This is illustrated in Figure 2 - A & B.

- (4) In assessing the potential increases in imports after import quotas are removed, estimating tariff equivalents of quota, quota rent or rates of protection in the pre-liberalisation period is one of central issues. Anderson et al estimated rates of protection defined as (wholesale price-border price)/border price to be 250 to 300 per cent in 1980 - 1982 and even greater after 1985 due to Japanese yen appreciation against currencies in beef exporting countries. Their estimates were derived from comparing wholesale prices of domestic fed dairy beef with average cif prices of imported beef on equivalent boneless basis.

Ohga estimated tariff equivalents of beef import quotas in 1987-88 at approximately 150 per cent by comparing the wholesale price of dairy steer beef, medium grade with carcass equivalent prices (cif basis) of grain-fed beef imported from the US.

A group of researchers at Australia Bureau of Agricultural and Resource Economics (ABARE) estimated nominal rates of protection for Japanese beef producers in 1988 - 1989 at around 200 per cent by comparing Japanese prices of medium grade dairy steers and the landed price of US fed steers, live weight basis. Their estimates of rates of protection increased from approximately 90 per cent in 1980 - 85 to 200 per cent in 1987 -1989 largely due to the appreciation of the yen against the US dollars. These estimates were endorsed by their observation that the price Japanese consumers were paying for fresh domestic chuck steak was approximately four times the price paid by US consumers for grain fed chuck, although some allowances may be needed for differences in the quality of the two products.

In order to circumvent possible technical difficulties involved in comparing the prices of two different products, researchers at MERC compared the wholesale price of chilled and frozen imported beef cuts in the Japanese market with estimated landed cif prices of these cuts from the US. Depending upon types of cuts and the time of comparisons, their estimates of tariff equivalents varied from 60 to 330 per cent with one exception of 450 per cent. They put the tariff equivalent to be 190 per cent in 1988 as an approximate estimate to project possible increases in imports after the removal of quotas.

Mori et al estimated rates of protection to be around 80 per cent in 1988 to 1989 by comparing wholesale and cif prices of imported chilled carcasses and regular imported beef cuts. They endorsed their estimates by using LIPC's net profit figures which might imply that the rate of protection could be even smaller.

- (5) As Longworth noted in his book, Beef in Japan, "Obviously beef is far from a homogeneous commodity in Japan". Average wholesale carcass prices of Wagyu steer beef, 1st and medium grades were 1,884 and 1,560 yen per kg, respectively in 1987 as compared to 1,289 and 1,157 yen per kg for fed dairy steer beef, medium and common grades respectively in the same year. Average wholesale prices of sirloin (striploin) cuts from medium grade Wagyu and dairy steer beef were 5,683 and 3,502 yen per kg, respectively in 1987 as compared to 2,524 yen per kg for frozen striploin cuts imported from the US in the same year.

If the estimated landed cif prices of US choice beef carcasses, say 400 yen per kg, are compared with Wagyu beef, 1st and medium grades, rates of protection would be 370 and 290 per cent, respectively. If comparisons are made between estimated landed prices of US choice beef and dairy beef, medium and common grades, rates of protection are much lower, ie 220 and 190 per cent, respectively. Still some people might argue that beef carcasses from the cattle fed on high concentrate diet for 13 months or so should not be compared with short grain-fed beef for only 120 days or so. Others might counter-argue that beef from beef breed such as Angus, Hereford should be superior in quality to beef from dairy breed even if fed for a longer period of time.

The best practical way may be to compare unregulated import cif prices of selected cuts, frozen and chilled with the freely determined wholesale prices of these cuts in the Japanese market. This procedure was taken by a group of researchers at ABARE before the BMAA was signed and researchers at MERC for the period prior to liberalisation.

- (6) As is illustrated in Table 4 the wholesale prices of Wagyu beef have been gradually rising for the past several years even after the BMAA was put into effect in July 1988. The wholesale prices of domestic fed dairy beef, medium and common grades (B-3 and B-2 after March 1988) have been fairly stable until recently. On the other hand, nakama sobas of most imported beef cuts, which are the prices purveyors sell products to end-users but not LIPC resale prices<sup>2</sup> which have been often politically manipulated, have been falling substantially over time since the end of 1985. To take a few examples, the average purveyors' price of frozen chuck and blade from Australia fell from 1,290 yen per kg in the 1st quarter of 1986 to 755 yen in the 1st quarter of 1988 and 773 yen in the last quarter of 1990. Those of frozen striploin from the US fell from 2,470 yen to 1,780 yen and 1,770 yen, respectively, during the same period and those of chilled full-set from Australia fell from 1,730 yen and 1,780 yen in the 1st quarter of 1986 and 1988 respectively to 1,220 yen in the last quarter of 1990.

Very briefly, the wholesale price of almost all imported beef cuts fell substantially, say more than 30 per cent over the period of 1986 to 1990 as beef imports were greatly increased whereas the wholesale prices of domestic beef remained the same or slightly increased during the same period. Thus it does not seem quite probable that imported beef has been highly integrated into the domestic beef market despite its greatly expanded share in the Japanese beef market. Therefore, it may not be appropriate to derive the rate of protection to the Japanese beef producers by comparing the price of domestic beef with import cif prices of beef from overseas. And it may also be misleading to derive the future demand for beef as a whole from tariff equivalent estimates, even if they are done properly.

However, it would be grossly mistaken to conclude that the competitive relationship between domestic beef and imported beef should be almost nil, especially in view of the recent collapse in the lower grade dairy beef market. The relation between domestic and imported beef was ascertained by Muri and Lin, using wholesale data before 1988. The relationship between different types of beef including imported diaphragm beef will be analysed with the more recent diversified data<sup>3</sup>.

## V An Update of Estimates of Tariff Equivalents of Import Quotas

At the 1982-83 Multilateral Trade Negotiations (MTN), it was agreed that Japan would increase beef import quotas by 9 kt each year from 135 kt in JFY 1982 to 177 kt in JFY 1987. Due to strong demand in the domestic market and political considerations for cheaper beef domestically on the one hand and mounting pressures from overseas for greater market access on the other hand, Japan increased actual imports far in excess of the agreed quotas, i.e. by 30 and 36 kt in JFY 1986 and 1987, respectively. Consequently, wholesale prices of almost all imported beef cuts in the Japanese market fell substantially in the period 1986 to 1987. It is apparent that wholesale prices should have been much higher than what they were if actual imports had been kept within the multilaterally agreed quota boundaries, yielding to much higher tariff equivalents.

The 1988 BMAA stipulated that beef import quotas be increased by 60 kt each year from the base year quota of 214 kt over the three year period of 1988 to 1990. Actual imports increased by 61 kt in the first year from 224 kt in JFY 1987, by 79 kt in the second year and only 19 kt to 383 kt in JFY 1990. It may be likely that prices would have been higher in 1989 and lower in 1990 if imports had been increased strictly in accordance with the agreed quotas.

Tariff equivalents of import quotas calculated as  $[\text{wholesale price} - \text{import cif price} \times (1 + \text{importers' marketing margin}^4)] / \text{import cif price}$  may have seriously been underestimated for the years of 1986, 1987 and 1989 in which actual imports were increased substantially more than internationally agreed quota increments and somewhat over-estimated for the year of 1990 in which the agreed increase in quota was not fulfilled.

Wholesale prices of virtually all imported beef cuts fluctuated widely over a short period of time of a few months to have followed a general downward trend during the past several years. To take frozen chuck rib from the US for example, its wholesale price went up from 1,350 yen per kg in mid-January 1989 to 1,600 yen in mid-March and up further to 1,920 yen in May-June and then down to 1,550 yen in September and down further to 1,450 yen in the end of the year. As the cif import prices in Japanese yen did also change in different fashions, tariff equivalents as expressed simply as  $(\text{wholesale price} - \text{import price}) / \text{import price}$  did fluctuate between approximately 55 and 130 percent within the one year period. Wholesale price of frozen chuck and blade imported from Australia went down from 1,125 yen in mid-January 1989 to 960 yen in June when chuck rib was the highest in price and further down to 730 yen in the end of the year. In this case, tariff equivalents could vary from 100 to 210 percent with different patterns of fluctuation over time.

It is, therefore, very misleading to take only a few cuts at one period of time, as ISU researchers did, to assess tariff equivalents for the purpose of simulating import liberalisation. Given so many numbers of beef cuts, chilled or frozen, it may not be practically possible or realistically wise to cover all beef cuts in all months when price data are available. In consultation with some LIPC and AMLC officials and editors of trade journals, we have selected 9 major cuts including aged and chilled full sets to estimate tariff equivalents by each cut every month from January 1988 to November 1991. Our estimates are presented in Tables 7 and 8 and general trends for two representative cuts for both US grain-fed and Australian grass-fed beef are shown in Figures 3 and 4.



## Endnotes

- (1) In any emergency time, when its imports threaten to exceed a fixed level, defined as equivalent to 120 percent of the previous year's imports or prospective imports, whichever is larger, Japan is allowed to come into negotiations with any partner country concerned to restrict its imports to the said level. Whenever negotiations fail to reach an agreement, emergency customs duties will be automatically applicable.
- (2) As seen in Appendix Table 1, the LIPC resale prices in the designated wholesale markets, the lower ends in particular, are often stuck to the LIPC reserved prices which are politically manipulated. Compare these prices with nakama sobas (purveyors' prices) in the Tokyo area which reflect the market conditions that move freely.
- (3) Mori and Chadec, "Price Relationships between Different Types and Grades of Beef in Japan," working paper, Massey University, forthcoming.
- (4) According to Gorman and Mori's findings about "non-quota beef", frozen diaphragm beef, average import marketing margins are estimated to be around 20 percent of import cif prices.

**Figure 1 Summary Statement of Japanese  
Beef Market Access Agreement,  
June 1988**

No more import quotas after JFY 1990; but

Higher tariffs than the current 25% : 70% in JFY 1991, 60% in 1992 and 50% in 1993 and thereafter;

60 kt increase each year in the phasing-out period of JFY 1998 to 1990;

Expansions in LIPC S/B/S from 10% to 30, 45 and 60% in JFY 1998, 89 and 90.

Emergency tariff of 25% if the volume of imports is to increase dramatically.

**Table 1 Beef Imports by Countries of Origin and Types of Beef,  
JFY 1985 to 1990**

JFY	US		Australia		Total	
	Chilled	Frozen	Chilled	Frozen	Chilled	Frozen
	-----kilo tons <sup>1</sup> -----					
1985	1.3	48.3	39.0	54.4	41.0	112.5
86	2.4	60.4	45.0	63.1	48.3	133.8
87	6.8	77.9	52.9	65.4	60.7	156.2
88	11.9	106.0	66.8	75.2	80.1	197.3
89	22.6	129.1	96.2	86.7	120.6	235.9
90	28.7	135.8	119.2	76.2	149.9	230.2

Notes: (1) Carcasses and bone-in cuts are converted into boneless weight.

Sources: Ministry of Finance, Customs Bureau, JAPAN EXPORTS and IMPORTS, various issues, and LIPC Monthly, various issues.

Table 2 Estimated Beef Stocks held by LIPC and Private Sectors as of the End of the Month, March 1988 to March 1991.

		Total Inventory	Domestic Beef	LIPC Inventory
-----kilo tons-----				
1988	March	64.8	8.5	29.2
	September	66.4	10.2	29.8
1989	March	66.5	8.6	16.9
	September	117.3	14.2	40.4
1990	March	110.8	14.3	26.9
	September	111.0	14.7	37.7
1991	March	116.9	13.6	56.4

Sources: LIPC Monthly, various issues.

**Table 3 Monthly Average Purveyors' Prices of Imported Beef by Selected Cuts, in the Tokyo Area, March 1986 to March 1991.**

	1986 March	1987 March	1988 March	1989 March	1989 Sept.	1990 March	1990 Sept.	1991 March
-----yen/kg-----								
<Grass-fed>								
Chuck & Blade	1,235	880	780	990	750	775	780	712
Full Brisket	1,043	785	715	955	875	850	665	608
Topside	1,418	1,050	950	1,165	1,100	1,170	940	867
Thick Flank	1,396	1,030	1,250	1,209	1,050	1,100	910	858
Cow Meat	1,134	865	710	890	740	700	715	663
Aged Full Sets	1,505	1,280	1,180	1,300	1,150	1,125	1,130	1,035
Chilled Full Sets	1,743	1,880	1,750	1,675	1,390	1,355	1,300	1,075
<Grain-fed>								
Striploin	2,400	2,300	2,125	2,100	1,850	1,750	1,800	1,758
Short Plate	1,045	1,000	680	950	730	710	690	665
Sq.Cut Chuck	1,210	975	850	890	890	835	890	817
Short Rib b-in	-	1,575	1,525	1,500	1,200	1,300	1,225	1,172

Sources: Prices for March 1986 and March 1991 are derived from Chikusan Nippo and prices for other months are from Meat Journal-Special Edition, various issues. There are some discrepancies, not major, in quoted price between the two sources.

Table 4 Wholesale Prices of Domestic Beef Carcasses, Wagyu and Dairy Beef, Selected Grades, Tokyo Market, May 1985 to Nov. 1991

		Wagyu Steers		Dairy Steers		Dairy Females	
		1st	2nd	2nd	3rd	3rd	Utility
-----yen/kg-----							
1985	May	2,139	1,760	1,276	1,139	1,050	888
	Nov	2,147	1,828	1,370	1,271	1,162	928
86	M	2,149	1,830	1,305	1,185	1,073	880
	N	2,175	1,899	1,377	1,268	1,133	814
87	M	2,143	1,852	1,252	1,117	1,003	740
	N	2,278	1,936	1,312	1,171	1,053	702
88	M <sup>1</sup>	2,392	1,999	1,205	1,127	1,009	745
	N	2,466	2,090	1,247	1,156	1,036	742
89	M	2,566	2,103	1,327	1,208	1,090	886
	N	2,638	2,201	1,274	1,260	1,076	611
90	M	2,688	2,216	1,267	1,006	846	458
	N	2,694	2,250	1,252	1,104	804	324
91	M	2,653	2,175	1,181	880	670	378
	N	2,784	2,225	1,116	896	681	325

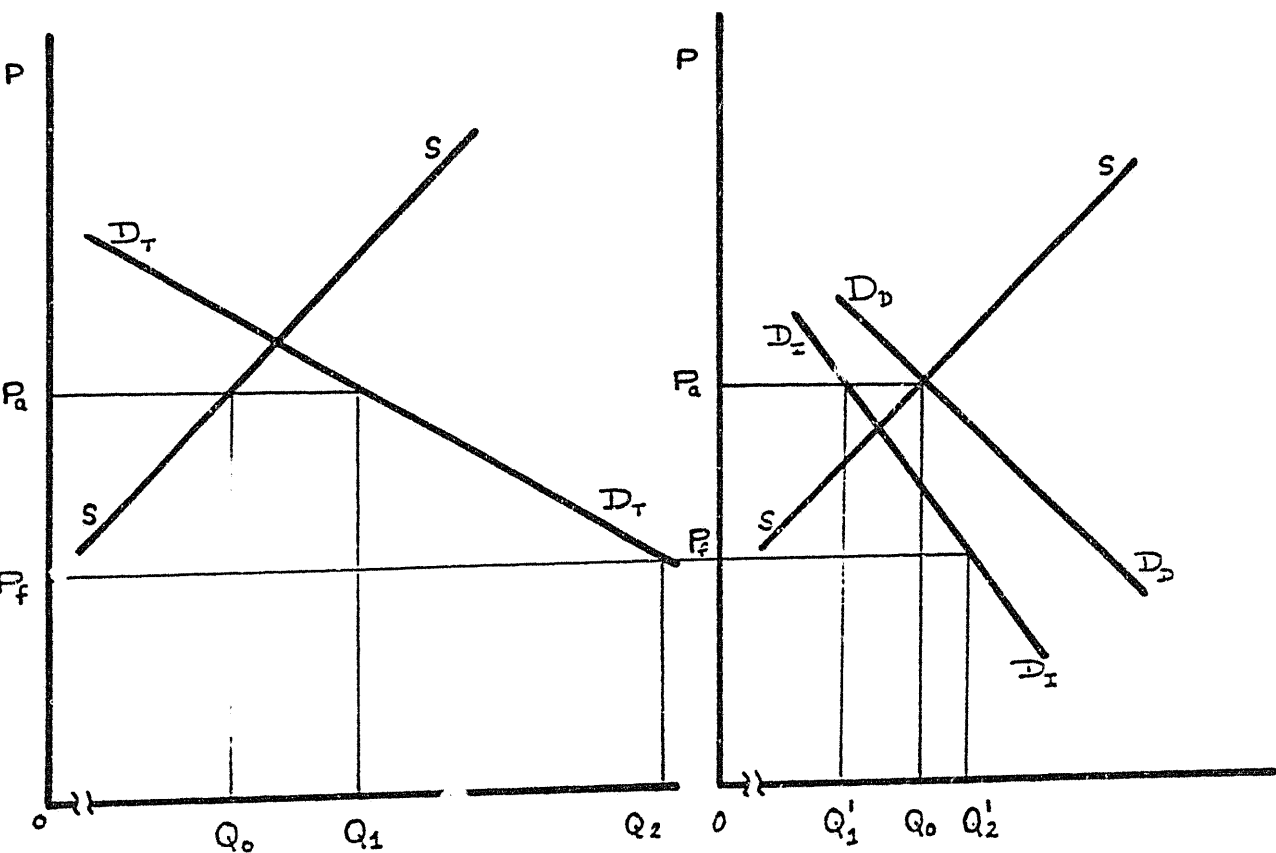
Notes: (1) A-5 and A-4 for Wagyu steers, B-3 and B-2 for dairy steers and B-2 and C-1 for dairy females, respectively since April 1988, due to changes in the Japanese grading system.

Sources: MAFF, Meat and Eggs Division, SHOKUNIKU BINRAN (Meat Annals), various issues and courtesy of MAFF branch office, Tokyo Meat Wholesale Market.

**Table 5 Predictions of Japanese Beef Imports after Liberalisation by Various Organisations**

	Base Yen	After Liberalisation
	kt	kt
Anderson et al <sup>1</sup>	100	383 - 581
ISU <sup>2</sup>	394	658
Ohga <sup>3</sup>	394	452 - 534
Trading Company M. <sup>4</sup>	394	473

- Notes: (1) Immediate liberalisation without import tariffs with the base year of 1977-1980.
- (2) In 1991 with the additional 25% tariff provision is invoked on the top of a 70% tariff.
- (3) Projections for JFY 1992.
- (4) Projections for JFY 1991. Personal communication with the representative, Livestock and Feed Division of the company.



$D_T$  : total demand for beef

$D_D$  : demand for domestic beef

$D_I$  : demand for imported beef

Case A: when beef is a homogenous commodity. After quotas are removed, imports will increase from  $Q_0$   $Q_1$  to  $Q_0$   $Q_2$  domestic production remaining protected by deficiency payments.

Case B: when domestic and imported beef are two different commodities. After quotas are removed, imports will increase from  $Q_1'$  to  $Q_2'$ .

FIGURE 2 Impacts of Trade Liberalisation. Two Extreme Cases: Case A where beef is a homogenous commodity and Case B where domestic and imported beef are two different commodities.



**Table 6 Average Monthly Wholesale Prices of Imported Beef, by Types and Cuts, Tokyo Area Immediately Following Quota Removal**

		Grass-fed Beef			Grain-fed			
		Chld F/set	Frozen Cow Meat	Frozen Topside	Chld <sup>1</sup> F/set	Frozen <sup>2</sup> Striploin	Frozen Short Rib	Frozen Chuck Roll
		-----yen/kg-----			-----yen/kg-----			
1990	Sept	1323	710	926	1467	1790	1254	1081
	Nov	1200	677	928	1384	1739	1233	1101
1991	Mar	1075	663	867	1288	1758	1172	993
	Apr	1055	659	850	1337	1715	1166	973
	May	999	643	813	1303	1689	1151	931
	June	943	640	799	1260	1688	1135	901
	July	880	632	763	1240	1700	1188	901
	Aug	880	645	771	1294	1685	1218	873
	Sept	1002	600	783	1309	1665	1285	871
	Oct	978	610	772	1295	1608	1285	863
	Nov	904	610	744	1294	1538	1276	913

**Notes:** 1 Grain-fed for 150-180 days for Sept 1990 to March 1991 and grain-fed for 180 days or so for April 1991 and thereafter.

2 Excluding IBP which are somewhat higher.

**Sources:** CHIKUSAN NIPPO, various issues.

TABLE 7 RATES OF PROTECTION FOR US BEEF  
1988 TO 1991  
(%)

		RIBEYE	CHUCK	CLOD	BRISKET	STRIPLOIN		
1988	1	148.28	112.72	133.93	146.12	197.08		
		120.85	107.45	130.85	136.08	130.81		
		136.95	118.48	148.29	138.96	125.14		
		167.03	130.53	174.21	186.16	144.79		
		116.16	111.83	111.49	146.29	121.20		
		105.91	119.25	125.81	126.03	127.31		
		117.06	112.16	129.25	153.33	149.10		
	7	82.56	122.87	153.45	137.88	94.18		
		72.39	134.76	177.10	257.57	76.85		
		74.07	207.11	229.60	221.85	89.41		
		90.13	213.40	209.13	203.96	122.26		
		94.17	198.95	201.74	183.54	135.07		
		1989	1	97.34	162.18	193.02	195.20	65.44
				102.42	128.13	181.89	188.08	100.46
86.92	108.92			182.80	178.38	106.75		
7	90.81		119.32	194.66	197.35	80.71		
	79.83		126.14	172.25	221.23	69.03		
	64.85		113.51	158.19	203.73	73.29		
	76.71		114.92	155.12	188.93	84.62		
7	71.17	104.77	139.51	168.30	73.89			
	76.84	86.95	127.84	161.26	109.91			
	72.17	85.15	122.35	161.51	100.91			
	53.42	66.89	111.38	143.92	87.78			
		56.11	64.87	114.54	108.64	87.87		

		RIBEYE	CHUCK	CLOD	BRISKET	STRIPLOIN		
1990	1	83.58	61.70	128.48	101.66	81.73		
		69.79	63.11	125.39	83.86	61.86		
		45.93	56.55	118.22	70.26	54.74		
		49.49	92.44	105.80	87.13	56.86		
		55.37	73.12	104.53	111.76	41.70		
		51.48	68.83	99.88	113.79	37.10		
	7	59.16	68.68	94.18	113.72	56.55		
		61.76	78.63	82.66	105.33	65.89		
		66.88	75.80	83.35	119.61	84.30		
		67.69	79.57	96.41	120.57	79.71		
		49.15	70.54	93.16	91.29	75.29		
		36.08	69.23	89.84	93.15	79.95		
		1991	1	80.33	74.90	81.81	84.13	93.87
				98.17	89.64	83.89	81.36	88.63
68.76	73.80			75.15	87.18	66.27		
74.81	62.05			73.04	108.41	53.95		
74.14	64.72			71.93	98.50	41.80		
64.21	61.18			66.69	83.29	43.48		
7	70.50		55.86	64.44	82.87	67.33		
	63.08		65.18	69.29	80.36	82.71		
		67.41	59.66	72.95	84.83	78.58		
		42.46	63.00	86.62	76.78	77.05		
		44.20	61.24	86.78	77.73	77.32		

**NOTES:**

(i)  $ROP = \frac{\text{JAPANESE WHOLESALE PRICE} - \text{ESTIMATED CIF IMPORT PRICE}}{\text{ESTIMATED CIF PRICE}}$

(ii) JAPANESE WHOLESALE PRICES ARE DERIVED FROM CHIKUSAN NIPPO, VARIOUS ISSUES

(iii) IMPORT PRICES FOR US CUTS ARE DERIVED FROM OMAHA QUOTATIONS (USDA) PLUS 23c US PER LB FOR FREIGHT AND INSURANCE

TABLE 8 RATES OF PROTECTION FOR AUSTRALIAN BEEF  
1988 TO 1990/91  
(%)

		AGED FULLSET	CHILLED FULLSET	COWMEAT	CHUCK & BLADE		
1988	1	91.16	199.43	131.96	--		
		87.29	210.37	106.92	138.00		
		103.74	204.14	119.21	149.13		
		121.36	214.78	149.22	197.48		
		86.64	206.73	148.22	--		
		87.25	190.61	125.41	--		
	7	111.82	168.15	124.01	155.71		
		83.05	157.92	131.91	135.91		
		95.96	142.55	186.89	--		
		92.72	134.21	220.41	--		
		110.71	149.51	165.05	219.02		
		120.32	128.45	127.11	--		
		1989	1	129.90	134.30	182.17	230.64
				105.76	152.62	148.28	191.84
89.33	135.64			149.53	185.05		
98.71	108.66			158.44	229.06		
85.03	94.12			158.00	212.44		
61.35	86.06			139.95	143.77		
7	48.72			85.75	106.46	105.94	
	65.10			104.58	94.21	--	
	65.21	94.97	81.14	141.54			
	67.48	107.89	72.89	--			
	61.08	105.03	62.70	--			
	77.09	113.26	66.05	83.23			

		AGED FULLSET	CHILLED FULLSET	COWMEAT	CHUCK & BLADE
1990	1	87.92	114.05	72.09	--
		67.75	99.21	85.37	--
		44.01	66.14	73.03	--
		41.82	47.04	68.53	111.49
		45.01	59.22	79.20	95.77
		36.33	53.26	75.00	70.73
	7	51.13	64.70	74.75	79.48
		57.97	74.38	64.47	81.77
		72.33	101.00	77.68	99.16
		67.94	103.03	102.14	114.10
		52.99	71.89	98.40	102.02
		41.10	45.06	84.09	87.93
1991	1	37.58	37.72	84.16	
		42.07	48.35	89.25	
		43.70	49.83	83.18	
		47.23	52.26	81.17	
		42.77	42.77	73.63	
		33.45	31.09	67.78	

NOTE:

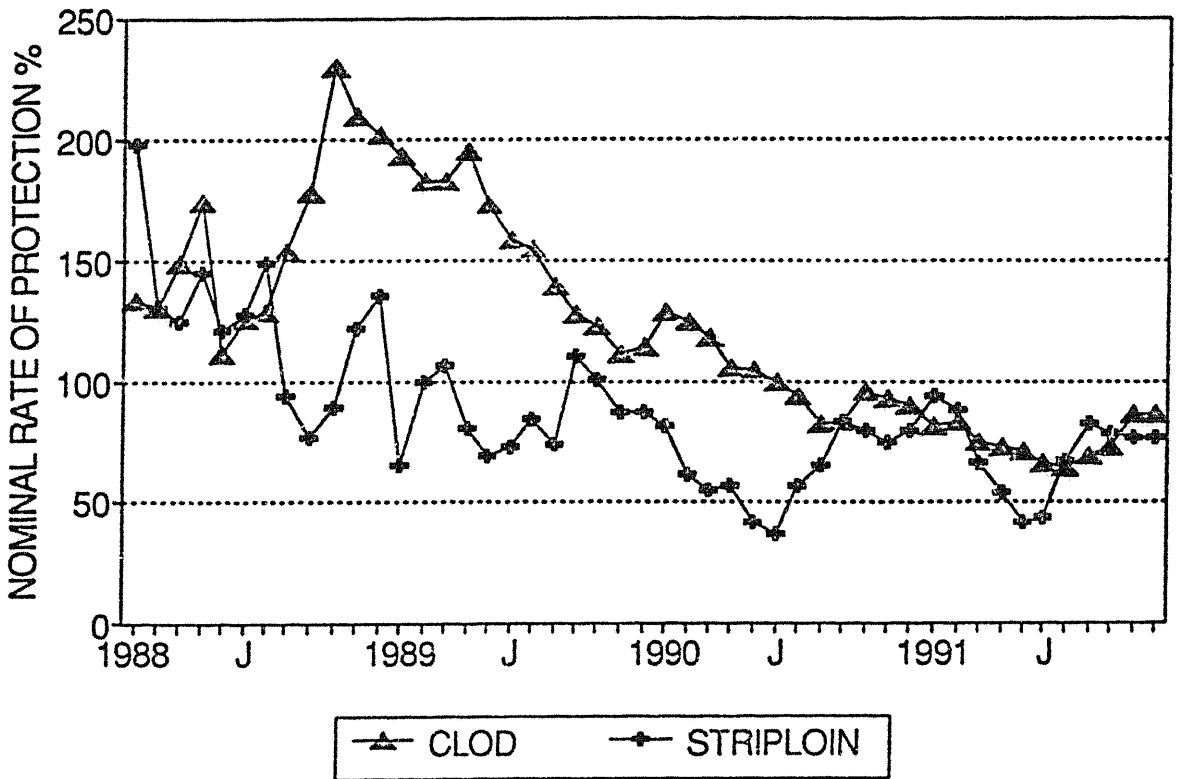
IMPORT PRICES FOR AUSTRALIAN CUTS ARE DERIVED FROM EXPORT FAS PRICES (AMLC) PLUS 38c AUST. PER KG FOR CHILLED BEEF. IMPORT PRICES FOR CHUCK AND BLADE ARE THOSE OF CIF PRICES ESTIMATED BY AMLC

28c FOR FROZEN BEEF

FIGURE 3

# ROP FOR CLOD AND STRIPLOIN

## JANUARY 1988 TO NOVEMBER 1988

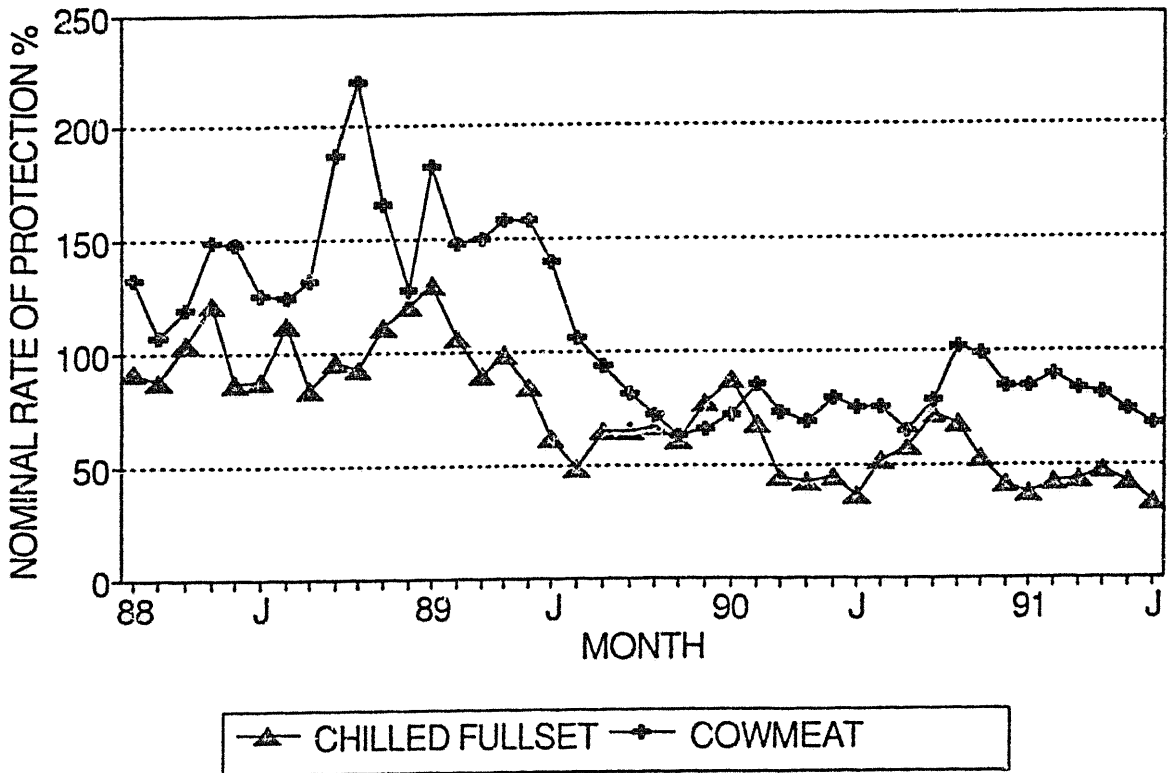


Notes: Refer to Notes for Table 7.

FIGURE 4

# ROP CHILLED FULLSET AND COWMEAT

JANUARY 1988 TO JUNE 1991



Notes: Refer to Notes for Tables 7 and 8.

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Appendix Table 1 The LIPC Resale Prices by Auction in the Major Designated Wholesale Prices, High-Low, and Average Monthly Purveyors' Prices in the Tokyo Area, October 1987 to September 1988, US Frozen Striploin and Australian Aged Beef, Full-Sets.

	The LIPC Resale Prices <sup>1</sup>				Purveyors' Prices in the Tokyo Area <sup>2</sup>	
	US Striploin		Aged F/S		US Striploin	Aged F/S
	High	Low	High	Low		
	-----Yen/Kg-----				-----Yen/Kg-----	
1987 Oct	2985	2007	1288	1083	2950	1200
Nov	2796	2007	1102	1083	2350	1095
Dec	2420	2007	1090	1083	2425	1090
1988 Jan	2227	2007	1101	1083	2225	1110
Feb	2177	1896	1253	1023	2075	1060
Mar	2008	1896	1199	1023	2125	1180
Apr	2406	1896	1592	1023	2600	1545
May	2799	1890	1259	950	2775	1100
Jun	2690	1890	1238	950	2650	1190
Jul	2950	1940	1567	950	2700	1275
Aug	2630	1940	1349	950	2575	1270
Sep	2325	1940	1361	950	2525	1330

Notes: (1) Resale by auction normally takes place once every month in 31 designated wholesale markets across the country.

(2) Prices which prevailed during the mid-month-week.

Sources: Monthly SHOKUNIKU KAI-SPECIAL EDITION '89, Shoku-niku Tsushin-sha, December 1988.