



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

# An Analysis of New Zealand Beef Exports to Japan

by

Doren Chadee and Hiroshi Mori\*

## Introduction

The liberalisation of the Japanese beef market has probably been one of the most debated trade issues over the last few years. In 1988 Japan agreed to gradually free its beef import system by first increasing its import quota on beef substantially over the 1987-1990 period. Secondly, as from JFY 1991 (Japan Fiscal Year), beef import quotas were abolished and replaced by a system of import tariff to be gradually reduced from 70 percent (CIF basis) in 1991 to 60 percent in JFY 1992 and 50 percent in JFY 1993. In addition, the LIPC, the agency responsible for regulating beef imports, has also been removed from beef business as from April 1991.

The changes in Japanese beef import policy over the last few years have meant greater opportunities for beef exporters to Japan. Currently three countries supply approximately 98 percent of all Japanese beef imports. These are Australia, New Zealand and the United States. Although much work has been done to assess the extent to which Australia and the US will likely benefit from the Japanese beef trade liberalisation initiative ( e.g., Wahl et al., Alston et al., Dyck, ABARE), studies on New Zealand's position in the Japanese beef market has not been fully analysed. This paper attempts to fill this gap.

## The Japanese Beef Import System

The Japanese beef import system has traditionally been highly regulated by a system of import quotas and tariffs. The Livestock Industry Promotion Corporation (LIPC), a quasi-government agency has traditionally held 80 percent of beef import quotas with the rest held by private traders. Only 39 trading companies were approved by the government to participate in the beef import business under the LIPC. Starting in the latter half of JFY 1984, a new system known as the Simultaneous Buy-Sell (SBS) tender was introduced into the LIPC beef business operation under which direct negotiation was allowed between domestic end-users and foreign suppliers regarding the types, specifications and prices of beef. SBS originally accounted for about 10 percent of the LIPC quota allotment.

-----  
Paper presented at the 36th Annual Conference of the Australian Agricultural Economics Society, Canberra, 10-12 February, 1992.

\*Lecturer in the Department of Agricultural Economics and Business and Visiting Fellow, Centre for Japanese Studies, Massey University, Palmerston North, New Zealand.

Japanese beef import policies have been designed primarily to protect domestic beef producers and related dairy sectors from international competition through import quotas and the interventionist policies of the LIPC. Import quotas were usually determined annually by the Ministry of Agriculture, Forestry and Fisheries (MAFF) in consultation with the Livestock Industry Promotion Council (LIPC Council) in order to maintain the wholesale prices of domestically produced beef carcasses within some predetermined stabilisation bands. About 80 percent of the quotas were then allotted to the LIPC which then had to determine the quantities of the different types of beef (grain-fed or grass-fed, chilled, aged or frozen, and the different cuts) to import in order to fill the quotas.

The Japanese beef market liberalisation initiatives started with the signing of the Beef Market Access Agreement (BMAA) in 1988 between the United States and Japan and a similar agreement between Japan and Australia soon after. Under this agreement, the Japanese beef import quota and tariff systems were to be phased out by 1991. During the three year phasing-out period (JFY 1988 to 1990), import quotas were drastically expanded by 60,000 mt every year from 214,000 mt for the base year, 1987. Tariffs were to remain at 25 percent of the CIF price over the 1988-1991 transitional period (see table 1).

In the latter half of JFY 1988, the SBS was expanded to 30 percent of the LIPC quotas for that year, 45 percent for JFY 1989 and 60 percent for JFY 1990. Under the new expanded SBS, beef imported into Japan became greatly diversified with respect to the types, cuts and various specifications. For example the number of different beef cuts increased from 35 in 1987 to 170 in 1989. Imports of heavy carcasses from long grain-fed cattle also commonly known as "chilled carcasses" in the Japanese beef trade increased from 571 mt in 1986 to 24,755 mt in 1989. Similarly the imports of chilled boneless grain-fed beef increased from 1756 mt in 1987 to 12,542 mt in 1989.

As of 01 April 1991 import quotas have been lifted and the LIPC has been removed out of beef import business. Replacing the old quota and tariffs is an ad-valorem tariff of 70 percent (CIF) in JFY 1991 to be gradually reduced to 60 percent in JFY 1992 and 50 percent in JFY 1993 and for subsequent years. Under the new agreement, an additional import tariff of 25 percent is allowed as a safeguard measure should beef imports exceed some predetermined levels (see table 1).

Table 1: Japanese Beef Import System

Quota	Transitional Phase				Post-Transitional Phase		
	1987	1988	1989	1990	1991	1992	1993
Global	214,000	274,000	334,000	394,000	472,000 <sup>a</sup>	667,360 <sup>a</sup>	680,832 <sup>a</sup>
Special	20,000	25,000	27,000	30,000	0	0	0
General	194,000	249,000	307,000	364,000	0	0	0
Private	19,000	24,000	307,000	36,400	0	0	0
LIPC <sup>b</sup>	174,600	224,100	276,300	327,000	0	0	0
Tender	157,140	156,870	151,965	131,040	0	0	0
SBS <sup>c</sup>	17,460	67,230	124,335	196,560	0	0	0
Tariff (%)	0.25	0.25	0.25	0.25	0.70	0.60	0.50

<sup>a</sup> Level of beef imports that invokes an additional 25% tariff as a safeguard measure.

<sup>b</sup> LIPC is Livestock Industry Promotion Corporation.

<sup>c</sup> SBS is simultaneous buy/sell.

Source: Wahl et al.

## New Zealand's Beef Exports to Japan (Hondo)

New Zealand's beef exports to Japan dates back to many years. Historical data reveals that in the mid sixties New Zealand was the second largest exporter of beef to the Japanese market after Australia, the single dominant supplier of beef to that market. The information in Table 2 indicates that on average over the 1965-1969 period New Zealand accounted for as much as 20 percent of the total Japanese beef imports while Australia accounted for approximately 74 percent of the market. Starting in the early 1970s, both New Zealand and Australia's shares of the Japanese beef market have declined steadily.

On average, about 60 to 65 percent of all Japanese beef imports came from Australia between 1980 and 1990. These were mostly grass-fed beef. The remaining 20 to 35 percent of beef imports were mostly frozen grain-fed beef from the United States. However, in the latter part of the 1980's and following the signing of the BMAA in 1988, there has been a gradual shift in the proportion of imported beef and domestically produced beef consumed in Japan as well as in the source from which Japan procures its imported beef. In JFY 1990, it has been estimated that only slightly over 50 percent of beef consumed in Japan came from domestically produced beef. Of the total amount of beef imported, 51.7 percent came from Australia, 42.7 percent came from the US and 3.5 percent came from New Zealand.

Beef imports from Australia have grown by 59 percent compared to 91 percent growth for imports from the US between 1987 and 1990. By 1990, New Zealand accounted for just 3.8 percent of the total amount of beef imported by Japan while Australia's share was down to approximately 45 percent. Over the same period of time, however, the United States has emerged as a major exporter of beef to Japan with its market share increasing from approximately 2 percent in 1970 to more than 43 percent in 1990. The information from Table 2 reveals that over the last decade New Zealand's market share of the Japanese imported beef market has not changed substantially. Over the 1985-1987 period, New Zealand had maintained an annual average market share of 3 percent. During 1988 and 1989, New Zealand's market share increased to an average of 4.7 percent before declining steadily since 1990.

Different researchers have different explanations regarding the dramatic increases in US beef exports to Japan over a relatively short period of time. One of the arguments commonly put forward is that over the last decade the US has benefited from preferential treatment under the import quota system. One such example includes the disproportionate allocation of quotas for high quality beef (HQ) in the production of which the US has a comparative advantage.

Table 2 : Japanese Beef Imports

	Total (tons)	USA		Australia		N Zealand	
		QT (tons)	Share %	QT (tons)	Share %	QT (tons)	Share %
1965-1969	na	0	na	74	na	20	
1970-1979	na	9	na	83	na	6.7	
1980	123952	23674	19	93614	75	4310	3.5
1981	123646	27543	22	87071	70	6543	5.3
1982	122694	32079	26	86099	70	3469	2.8
1983	137542	37728	27	91043	66	9381	6.8
1984	145084	41640	28	91962	63	7907	5.4
1985	150207	45938	30	93129	64	7449	4.9
1986	177948	62137	35	105266	59	6829	3.8
1987	216671	82483	38	120552	55	8191	3.8
1988	258423	106556	41	134490	52	11397	4.4
1989	339121	144357	42	172336	50	15224	4.5
1990	365879	157857	43	191163	52	12805	3.5

Source: Japan Exports and Imports, Ministry of Finance, Tokyo.(various issues)

#### New Zealand's Beef Exports to Okinawa

Although New Zealand's share of the Japanese imported beef market has remained significantly small over the last two decades, one peculiar aspect of New Zealand's beef trade with Japan has been in New Zealand's role as the dominant supplier of beef to that market. Okinawa is a small prefecture of Japan remotely located to the south-west of mainland Japan. Okinawa has an estimated population of 1.1 million and is considered to have one of the lowest levels of GDP per capita. Okinawa was occupied by American forces until 1974 when it was handed over to the Japanese Government. Given its historical past, its poor economy and its quasi isolation from mainland Japan, Okinawa has traditionally benefited from substantial assistance from the central government in Tokyo.

One of the areas where Okinawa has historically had preferential treatment is in the beef business. Under the beef import quota system, unlike the rest of Japan, Okinawa was entitled to a special beef import quota that did not fall under the LIPC. In other words, the LIPC did not have the power to manipulate the allocation of import quotas for beef in Okinawa. Unlike for the rest of Japan, once the beef import quota was allocated by the Ministry of Agriculture and Fisheries, importers were free to fill the quota as desired. In this respect the Okinawa beef market has traditionally been open to competition.

Approximately 90 percent of beef in Okinawa is imported beef and the majority is currently supplied by New Zealand. New Zealand's share in the Okinawa beef market has increased from 28 percent in 1973 to 55 percent in 1990 (table 3). In terms of volume, New Zealand has more than double its volume of beef exports to Okinawa between 1985 and 1990. Although it is not clear how New Zealand has established itself as the dominant supplier of imported beef in Okinawa, it is interesting to note that New Zealand has even displaced

Australia as the major supplier of beef to that market. Australia's market share of the Okinawa beef market has dropped steadily from 50 percent in 1980 to 30 percent in 1990. The US has traditionally been a small supplier in this market despite the fact that beef imports from the US to Okinawa more than doubled between 1985 and 1990. Together, the two dominant suppliers of beef in the Okinawa market, Australia and New Zealand, approximately 85 percent of the Island's total beef imports.

#### Characteristics of New Zealand Beef Exports to Japan

New Zealand has traditionally exported frozen grass fed beef to the Japanese market. As pointed out in the previous sections, Okinawa has traditionally been the most important regional market for New Zealand beef. The information from Table 4 shows the amount of beef exported to Okinawa and to the rest of Japan from New Zealand. On average approximately 50 percent of all frozen beef cuts exported to Japan goes to Okinawa. Mainland Japan remains the major market for chilled beef as well as for frozen manufacturing beef. In recent years the amount of chilled and frozen manufacturing beef going to Okinawa has been negligible.

Table 3: Okinawa Beef Imports

	USA		AUS		N Zealand		Others		Total
	QT	%	QT	%	QT	%	QT	%	
1973	27	-	3192	71	1234	27	31	-	4484
1974	92	3	2905	69	1180	28	3	-	4179
1975	146	3	3963	63	2116	34	6	-	6230
1976	96	2	2691	55	2051	42	0	-	4874
1977	67	1	4049	60	2551	38	0	-	6667
1978	84	2	3994	67	1891	31	0	-	5969
1979	84	2	3681	68	1616	30	0	-	5381
1980	211	4	2876	50	2557	45	0	-	5643
1981	244	5	2426	43	2877	51	60	1	5607
1982	378	7	3100	53	2017	35	269	5	5764
1983	417	8	1958	34	2953	51	421	7	5750
1984	425	7	2215	35	1874	30	1738	28	6252
1985	446	8	1168	19	2720	44	1737	29	6070
1986	386	6	1397	22	2867	45	1658	27	6308
1987	430	6	2536	37	3395	49	547	8	6908
1988	646	8	2328	27	4667	55	785	10	8426
1989	1197	14	2561	29	4099	46	922	11	8849
1990	956	11	2637	30	4826	55	328	4	8746

Note: All volumes are in shipped weight

Source: Bureau of Customs, Ministry of Finance, Microfiche, (various issues).

Table 4: New Zealand Beef Exports to Japan and Okinawa

	Chilled Beef	Frozen cuts	Frozen Manufacturing	Total Exports
-----				
Japan	tonnes			
1985	654	4133	2662	7449
1986	517	3388	2924	6829
1987	1110	4598	2483	8191
1988	1276	6533	3588	11397
1989	820	6399	8005	15224
Of which Okinawa				
1985	88	1848	530	2466
1986	150	1870	559	2579
1987	116	1527	124	1767
1988	201	1890	284	2375
1989	25	3515	1041	4581
Okinawa as % of Japan				
1985	13	45	20	33
1986	29	55	19	37
1987	10	33	5	21
1988	15	29	8	21
1989	3	55	13	30
-----				

Source: New Zealand Meat Producers Board (various issues)

The information in Table 5 shows clearly that in 1990 New Zealand has been the dominant supplier of cube roll, knuckle, tender loin and chuck roll in the Okinawa market. It is interesting to note that in 1990 for instance New Zealand supplied 3010 metric tons of cube roll to Okinawa, accounting for approximately 75 percent of the total cube roll imported by that region. It is even more interesting to note that the amount of cube roll exported to Okinawa that year constituted approximately 90 percent of all the cube roll produced in New Zealand that year.

Australia which accounts for less than 30 percent of the Okinawa beef supplies mostly frozen manufacturing beef to that market. In 1990 for instance, Australia supplied approximately 63 percent of the total volume of manufacturing beef imported by Okinawa.

Table 5: Okinawa Beef Imports: By major Cuts and Supplier: 1990

Type of Beef	country of Origin				Total
	U S A	A U S	N Z	Others	
Cube Roll	421	561	3010	5.9	3999
Knuckle	-	269	1060	-	1329
TDR Loin	492	294	800	-	1587
Strip Loin	150	56	48	-	255
Brisket	23	130	93	-	356
Chuck	9	553	715	-	1278
F. Hind	300	15	15	49	380
Manufacturing	-	1609	789	-	2541
Total	1398	3581	6537	-	11823
Mkt. Share	11.8	30.3	55.3	-	100

Source: Okinawa ChiKusan Kosha, June 1991.

## EMERGING TRENDS IN BEEF CONSUMPTION IN JAPAN

### National Beef Market Characteristics

The changing nature of Japanese beef imports over the last several years may be directly related to changes in the overall pattern of food consumption in Japan. For example, in 1963 the average Japanese household spent approximately 41 percent of its total living expenditures on food compared to only 27.6 percent in 1990. Hence, between 1963 and 1990, the proportion of total living expenditures on food had dropped by approximately 14 percentage points. Over the same period of time, several important developments have emerged in the pattern of beef consumption in Japan.

It has been estimated that in 1989 about 50 percent of the total quantity of beef consumed in Japan was actually consumed at home. Of the remainder, about 2/3 were consumed away from home and approximately 1/3 was consumed in processed form (e.g., sausages, canned products, instant prepared meals). Similar to the trends for other meats, for example pork and chicken, at-home consumption of unprocessed beef has declined substantially in recent years. The information in Table 6 suggests that there is a general trend for Japanese to consume more meat "away from-home" in the 1980s compared to the early 1970s. Between 1975 and 1989, the proportion of beef consumed at-home has declined from 69.5 percent to about 50.2 percent. By comparison, however, the proportion of beef consumed away from-home (processing and catering) has increased appreciably. The most significant change in the pattern of beef consumption is associated with the catering segment of the beef market which has doubled in importance from 17 percent in 1975 to 35 percent in 1989. Beef



consumed in this market segment is broadly defined to include all beef consumed away from-home (restaurants and institutional outlets).

Further analysis of beef consumption in Japan reveals that in 1986 as much as 85 percent of all domestically produced beef were consumed at-home compared to only 15 percent for imported beef (see Table 6). By contrast, only about 10 percent of domestically produced beef were used for processing purposes compared to 90 percent for imported beef in 1986.

Since beef imports have increased substantially since 1986 and a greater proportion of imported beef consists of grain-fed beef in chilled form, it is believed that the proportion of imported beef consumed at-home is currently much higher than in 1986. Nevertheless, the basic structure of beef consumption in Japan may still be that a greater percentage of imported beef is used either for "away from home" consumption or for processing whereas domestically produced beef is mostly purchased for direct home consumption.

Table 6: Beef Consumption Trends in Japan

	Home Consumption	Away From Home Consumption Processing	Catering
Total Beef			
1975	69	13	17
1980	61	13	25
1985	55	14	32
1990	50	15	35
Proportion of:			
Imported Beef (1986)	15	90	40
Domestic Beef (1986)	85	10	60

Source: (1) CHIKUSAN NO JOHO-KOKUNAI HEN (LIPC Monthly Domestic Report), August 1991, LIPC. Tokyo.

(2) Ichiro Takahashi, "Trade Liberalisation of Beef in Japan", Japanese Beef Industry Facing Trade Liberalisation, Food and Agriculture Policy Research Center, Tokyo, 1990.

### Regional Variations in Food and Beef Consumption

The pattern and composition in food consumption of Japanese households varies greatly from region to region. Historical data from the Family Income and Expenditure Survey, shows that in Kinki-Kansai (Osaka-Kyoto area) and in the western parts of Japan people have traditionally consumed more beef than pork whereas in Kanto (Tokyo-Yokohama area) and in the northern parts of the country people eat less beef and more pork.

In the early 1970s, households in Kinki consumed 14.5-15.0 kg of beef per year, amounting to approximately 10 times and 3 times the amount of beef consumed by households in Hokkaido and Kanto, respectively. In Kinki,

household consumption of beef increased by 17 per cent from 1975 to 1985 and then decreased by 10 per cent to 16.54 kg/year in 1990. In Kanto and in Hokkaido beef consumption has nearly doubled between 1975 and 1990. Beef consumption at home has been increasing steadily both in Kyushu and Okinawa to reach the levels that prevailed in Kinki in 1975 only recently. As a result, geographical variations in beef consumption in household have become much narrower lately compared to 15-20 years ago although much regional variations still exist (Table 7).

It is difficult to predict precisely how household purchases of beef will change in the future, especially following trade liberalisation. Theoretically, as household disposable income increases steadily and if retail prices of beef decline due to trade liberalisation as well as increased efficiency in domestic beef production and marketing, household consumption of beef should increase. An attempt to assess the increases in beef consumption in the post liberalisation period on a regional basis was made by estimating beef demand for five different regions in Japan using annual data covering the 1973-1990 period. The estimated equations are summarised in Table 8.

Table 7: Household Purchases of Beef, by Region: 1963-1990, (kg/year).

	1970	1975	1980	1985	1990
Hokkaido	1.25	1.40	1.72	2.57	3.64
Kanto	3.85	4.78	5.98	7.11	8.31
Kinki	14.51	14.85	16.65	17.39	16.54
Kyushu	8.16	10.29	12.58	13.08	14.87
Okinawa	na	10.44	10.83	11.65	13.51
All J.Ave.	6.78	7.78	9.15	9.82	10.82

Notes: (1) NA = Not available

Sources: Family Income and Expenditure Survey (FIES), Statistics Bureau, Management and Coordination Agency, (various issues).

Table 8: Regional Beef Demand Estimated

Explanatory Variable	Region				
	Okinawa	Hokkaido	Kanto	Kyushu	Kinki
CONSTANT	-103 (.30)	-32 (0.7)	58 (0.6)	32.9 (0.2)	-145 (0.8)
RPBi	0.03 (0.3)	-0.10 (2.7)	0.004 (0.3)	-0.36 (1.8)	-0.04 (0.15)
RPPi	0.16 (0.5)	0.07 (0.7)	-0.0006 (0.007)	-0.04 (0.15)	0.27 (0.6)
RPCi	-0.63 (1.4)	-0.13 (1.5)	-0.24 (2.2)	0.07 (0.12)	0.56 (0.5)
REXPi	0.03 (1.6)	0.008 (1.4)	0.03 (2.8)	0.06 (2.2)	0.01 (1.7)
HSIZEi	28 (1.4)	13 (1.3)	-15.7 (0.9)	7.31 (0.2)	71.6 (1.7)
LDVi	0.39 (1.4)	0.64 (3.4)	-0.29 (1.3)	-0.1 (2.2)	0.17 (0.4)
R-SQ	0.65	0.97	0.98	0.93	0.79
D-H	1.6	2.1	1.8	2.3	1.7
F(6,19)	4.0	56	100	37	6.4

Notes: The numbers in parentheses are t values. Variable notation is as follows: RPB= Real price of beef, RPP=Real price of pork, RPC= Real price of chicken, REXP= Real household expenditure on food, HSIZE= average household size and LDV=lad dependent variable. I=(Okinawa, Hokkaido, Kanto, Kinki, Kyushu).

All regional beef demand equations were estimated with annual data from 1973 to 1990. Except for Kanto and Okinawa, the own price coefficient had the correct sign for all regions. The coefficients for the expenditure variable also had the correct sign and were all statistically significant. Based on the above estimates we derive the own price and income elasticities for all five regions. The computed regional own price and income elasticities for household beef consumption are summarised in Table 9.

Table 9: Price and Income Elasticity of Demand for Beef in Japan

	Own Price Elasticity	Income Elasticity
Okinawa	0.50	0.62
Kyushu	0.68	1.14
Kanto	0.05	-0.98
Hokkaido	0.79	0.45
Kinki	0.45	0.79

Note: Elasticities are computed at means

The results suggest that there are significant regional differences in both the income and own price elasticities. Hokkaido and Kyushu appear to be the two regions where decreases in beef prices would have the greatest impact. Although the own price elasticity for Kanto, which had the lowest household beef consumption in 1990, is relatively small, its relatively high income elasticity indicates that as that region becomes more affluent, household beef consumption is likely to increase appreciably.

#### Shifts Towards Chilled Grain-Fed Beef

Another recent development in Japanese beef imports relates to the gradual but rapid shift towards the imports of beef in chilled form rather than in the conventional frozen form. It also appears that since liberalisation, the number of beef cuts has also increased dramatically since liberalisation. In addition, market signals also point towards a general preference for grain fed beef in chilled form. Table 10 summarises the volume of Japanese imports of chilled and frozen beef since 1986. The general trend is toward the imports of boneless chilled beef which has undergone phenomenal growth over the 1987-1990 period. The imports of bone-in and boneless chilled beef increased by almost 118 percent and 151 percent respectively between 1987 and 1990. The corresponding increases for frozen beef imports are 52 and 48 percent respectively. It is interesting to note that in 1990 as the volume of chilled beef imports increased, that of frozen beef declined slightly over the previous year.

On a country basis, table 10 also shows that the greatest increase in the volume of chilled beef exports between 1987 and 1990 was from the US (by 819 percent). Imports from Australia, by far the single largest supplier of chilled beef to Japan, increased by 107 percent over the same period. Until recently Australian chilled beef exports to Japan have been mostly from grass-fed cattle whereas US chilled beef have been mostly from grain-fed cattle. The recent switch toward greater chilled beef imports from the US may indicate a slight preference for grain-fed chilled beef. This hypothesis can be further supported by the fact that in recent years the proportion of Australian grain-fed chilled beef exports to Japan has increased substantially since 1989.

The volume of chilled beef exports from New Zealand has been marginal compared to Australian and US exports. New Zealand's share of the total Japanese chilled beef market was approximately 1.22 percent in 1989 and 0.55 percent in 1990. The volume of chilled beef exports to Japan from New Zealand in 1990 was substantially lower than exports in the previous three years. As discussed above, growth in Japanese beef imports appears to be in the grain-fed chilled beef segment of the market, an area where New Zealand's recent performance has been disappointing.

Table 10: Japanese Beef Imports by Type and Source

A: ALL SOURCES

JFY	Chilled Beef		Frozen Beef	
	bone in	boneless	bone in	boneless
1986	1031	47,559	4686	130,474
1987	9899	53,758	5130	152,088
1988	16486	68,744	6523	192,073
1989	28735	100,517	8290	229,258
1990	21623	134,771	7777	224,004
Apr-Aug:1991	2317	69,016	3045	69,837

B: Boneless Chilled Beef, by Country of Origin

Cal. Year	USA	AUS	NZ	Total
1986	1,737	43,942	672	46,369
1987	2,270	49,815	881	53,040
1988	4,955	56,859	1018	63,047
1989	12,416	79,794	1144	93,673
1990	20,863	103,285	689	125,285
Jan-Aug:91	25,614	75,871	306	102,022

Notes: (1) April 1-March 31.

(2) Mostly carcasses or quarters, air-freighted.

Source: LIPC Monthly, Various issues and Bureau of Customs, Ministry of Finance, Microfiche, Aug. 1991.

IMPLICATIONS FOR NEW ZEALAND BEEF EXPORTS

An analysis of New Zealand's beef exports to Japan reveals that over the last decade the country's market share has not changed substantially. During the 1985-1987 period, New Zealand had maintained an annual average market share of 3 percent. In 1988 and 1989, New Zealand's market share increased to an average of 4.7 percent. However since 1990 New Zealand's market share has declined steadily.

Until recently, New Zealand's beef trade with Japan has been concentrated in the Okinawa region. New Zealand has maintained or even slightly increased its market shares in Okinawa by supplying around 60 per cent of Okinawa beef imports. However, Okinawa does not seem to be a very promising market for New Zealand beef exports in the future. This is because:

(1) People in Okinawa have been consuming mostly grass-fed beef imported from Oceania but as people in Okinawa become economically better off and their

life-style becomes more sophisticated they will likely eat more grain-fed beef, most likely in chilled form. Currently New Zealand is not adequately equipped to service the Okinawa chilled, grain-fed beef market.

(2) Analyses of food demand by region also revealed that while total household living expenditures and household expenditure on food in Okinawa are well below the national averages, household beef consumption in Okinawa is well above the national average. In this respect, further increases in beef consumption in that region might be difficult to achieve.

(3) Most of New Zealand's exports to Okinawa consist of a selected number of specific cuts. These include cube rolls, knuckles, tender loin and chuck. Recently, and specially in the post liberalisation period, new players have entered into the Okinawa market. For example, Ireland has exported mainly cube roll and manufacturing beef to Okinawa. These two products compete directly with the New Zealand product.

(4) Under the old beef import regime in Okinawa, beef importers were subject to only 20-25 percent surcharges on top of regular tariff of 25 percent (CIF). However, following liberalisation, Okinawa beef importers are faced with 70 percent tariff in JFY 1991, 60 percent in 1992 and 50 percent in 1993. Quite clearly, for Okinawa, the new tariff schedule is more restrictive than the old system. In this respect, imported beef prices in Okinawa could rise thereby adversely affecting its consumption.

As far as household consumption is concerned, beef has been a declining product in Kinki and Okinawa whereas it has experienced fast growth in Hokkaido and in northern Honshu, traditional pork-eating regions. Under normal circumstances, growing products with high income elasticities of demand tend to be price-elastic as well. When retail prices are reduced, demand would grow further with higher incomes. Household consumption of beef has been growing moderately in Kanto and the trend is expected to continue in the future. Hence New Zealand could usefully diversify into those markets.

Another important development that could have serious implications for New Zealand beef exports to Japan relates to the structural changes in Japanese food consumption in general and beef consumption in particular. The market for table meat has grown much faster for "away from home" consumption as opposed to "at-home" consumption. Fresh meat or unprocessed meat for at-home consumption has not been a "growth product" for some time in Japan and this trend is not likely to be overturned easily. New Zealand could target the "away from-home" market including the fast food, hotel and restaurants segments of the market where high quality chilled grass-fed beef could be successful as table meat.

## References

- Australian Bureau of Agricultural and Resource Economics (ABARE), Substitution Relationships between Beef and Other Meats in Japan, Technical Paper 91.6, Sydney, 1991.
- Alston J, Colin Carter and Lovell Jarvis. 1989 "Debate on Japanese Beef Trade Liberalisation: It May Not Benefit Americans.", Choices, Fourth Quarter.
- AMLC, Market News, Australian Meat and Livestock Corporation, Various issues.
- CHIKUSAN NO JOHO-KOKUNAI HEN (LIPC Monthly Domestic Report), August 1991, LIPC. Tokyo.
- Coyle W., and John Dyck. 1989 "Debate on Japanese Beef Trade Liberalisation: It Will Benefit American Agriculture." Choices, Fourth Quarter.
- Dyck, J. 1988. "Meat Demand in Japan", Pacific Rim - Agriculture and Trade Report, ERS/USDA, RS 86-3, August.
- Japan Bureau of Customs, Ministry of Finance, Microfiche, (various issues).
- Japan Exports and Imports, Ministry of Finance, Tokyo. (various issues)
- LIPC, Annual Report. Livestock Industry Promotion Corporation, Various issues.
- Longworth, J.D. 1983. Beef in Japan, University of Queensland Press, St. Lucia, pp. 196-198 in particular.
- Management and Coordination Agency, Annual Report of Family Income and Expenditure Survey, (various issues).
- Management and Coordination Agency, Monthly Report of Family Income and Expenditure Survey, (various issues)
- Ministry of Agriculture, Forestry and Fisheries. Food Balance Sheet, prepared by Survey Division, Minister's Secretariat (various issues)
- Mori, H. and W.D. Gorman. 1988. "Import Regulations and Consumers Benefit - The Case of Beef in Japan", Monthly Report No. 297, Senshu University Social Science Research Institute, March.
- New Zealand Meat Producers Board, Annual Reports (various Issues).
- Okinawa Chikusan Kosha, June 1991.
- Takahashi, I. 1990. "Trade Liberalisation of Beef in Japan", Chapter 1 in Japanese Beef Industry Facing Trade Liberalisation, The Food and Agriculture Policy Research Centre, Tokyo, June.
- Shokuniku Kankei Shiryo, prepared for the Livestock Industry Promotion Council, March 1990 and The Meat Statistics in Japan, Livestock Industry Bureau, MAFF, August 1991.
- Wahl Thomas, Dermot Hayes and Gary Williams, "Dynamic Adjustment in the Japanese Livestock Industry Under Beef Import Liberalisation", Amer. J of Ag. Econ., Feb. 1991.