ISSUES, FACTS, AND OPPORTUNITIES FOR EXPORTS OF U.S. BEEF TO JAPAN

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Introduction

Beef imports have been subject to government restrictions in Japan. In 1982, 72 percent of Japan's total beef supplies came from domestic production and 28 percent from imports, of which 9 percent came from the United States and 18 percent from Australia.

At the recent U.S.-Japan bilateral negotiation, it was agreed on April 7, 1984 that Japan would increase its import quota for H.Q.B. (high quality beef), mainly from the United States, by 6,900 metric tons every year from 30,800 mt in the fiscal year of 1983 for the coming four year period from 1984 through 1987. It was also agreed at the latest Australia-Japan negotiation on July 19 that Japan would increase its total beef import quota by 9,000 mt each year from 141,000 mt in 1983 for the coming four years. This implies that the expected increase in the beef import quota for Australia and New Zealand would be only 2,100 mt per year. Considering the fact that the U.S. share of the Japanese beef imports was less than one-third in 1983, the United States has gained a disproportionately large share of expected increase in beef imports to Japan through political negotiations rather than by the market place competition.

The results of the recent beef negotiation are similar to what happened in the U.S.-Japan multi-lateral negotiations in 1977-78, i.e.: the import quota for H.Q.B. was increased from about 8,600 mt in 1977 to 16,800 mt for 1978 and gradually up to 30,800 mt for 1983. As a consequence, the U.S. share of the Japanese beef imports has increased from 9.3 percent in 1977

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up to 16.6 percent in 1978, then to 20 percent in 1980 and 27 percent[1] in 1983. The Livestock Industry Promotion Corporation (LIPC), the Japanese quasi-government agency allocated about 80 percent of the total beef import quota, has been obligated to perform the above stated Japanese government commitment to beef imports. Judging from the way the LIPC calls for the tender from importers, there has been no direct competition between U.S. and Oceanianian countries, that is, separate tenders take place for grain-fed, high quality beef and grass-fed beef, respectively. Therefore, the recent rapid increase in the U.S. share of beef imports to Japan should be interpreted as a result of mounting political pressures from U.S. to Japan rather than that of international competition.

Most Americans seem to believe that grain-fed beef imported to Japan from the United States is high in quality and can compete advantageously with grass-fed beef from Australia or New Zealand.[2] But this may not be true. Table 1 shows that average wholesale prices of frozen beef imported from U.S. are approximately 20 percent higher in the Japanese market than those from Australia while landed prices of U.S. frozen beef are more than 40 percent higher than Australian frozen beef and that average wholesale prices of U.S. frozen beef are approximately 15 percent lower than those of chilled beef, virtually all from Australia, while landed prices of the former are slightly higher than those of the latter.

The Japanese meat trade has traditionally been placing great emphasis on the degree of marbling in beef. According to their standard, U.S. beef is not appreciably higher in quality than Australian beef, maybe because U.S. beef is too lean, even though most of it is USDA Choice. Unlike American's, consumers in Japan seem to be ready to pay incredibly high prices for higher degrees of marbling. In order to compete advantageously,

Table 1. Estimated average wholesale market prices[1] and average landed prices[2] of imported beef (primal cut basis), by form and country of origin, 1980 to 1982.

		1980	1981	1982
		dollars/lb.		
Frozen				
Australia:	Wholesale Price	2.73	2.46	2.10
	Landed Price	1.74	1.64	1.52
	Difference	.99	.82	.58
U.S.:	Wholesale Price	3.23	2.83	2.66
	Landed Price	2.53	2.24	2.39
	Difference	.70	.59	.27
Chilled				
All:[3]	Wholesale Price	3.56	3.60	3.10
	Landed Price	2.44	2.16	2.05
	Difference	1.12	1.44	1.05

[1]Weighted average of Nakama Soba (Purveyor's prices), by estimated proportions of various primal cuts imported, Kanto area, according to CHIKUSAN NIPPO (LIVESTOCK DAILY).

[2]Average c.i.f. price x 1.35 (25 percent tariff and 10 percent import charges, etc.).

[3]The U.S.'s share of total chilled beef was around 3.0 percent in the 1980-82 period.

or to avoid the direct confrontation with low-cost Australian beef in the Japanese import market, U.S. beef to be exported to Japan should be differentiated from Australian beef.[3] One alternative to differentiate U.S. beef from grass and/or short lot fed Australian beef is to feed cattle for considerably longer periods in order to produce a much higher quality product according to Japanese standards.

Our strategy of up-grading U.S. beef might be one of a very few perceivable ways to survive the beef import liberalization[4] which the United States has been consistently seeking to Japan for the past several years. Preliminary analysis seems to indicate that the expected increase in costs due to longer feeding would be more than offset by the expected increase in prices. And it might also provide a way to expand U.S. beef sales in dollar value to Japan under the present quota system which will last at least for the coming four years.

SOME BASIC FACTS AND MARKETING STRATEGY IMPLICATIONS

The famed "Kobe" beef comes from specially selected herds of Wagyu heifers, "ideally fed" for as long as 30 months (Longworth, pp. 79-108). Wagyu steers were fed high-energy diets for an average of 19.7 months in 1982. Dairy steers marketed in 1982 were fed high-energy diets an average of nearly 14 months, and their finishing weight averaged 1,470 pounds. During the past 10 years, the average length of time on feed for Wagyu steers has been extended by 6 months (MAFF, Production Cost, pp. 184-187). People somewhat knowledgeable about cattle feeding should realize how U.S. beef from cattle fed high-energy rations for only 120 to 140 days ranks in the low end (3rd grade) of Japanese fed dairy beef, and far below 1st grade Wagyu steers, not to speak of "Kobe" beef.[5]

Tables 2 and 3 illustrate average wholesale carcass prices and percentage distribution of slaughter beef cattle in Japan, by class of animals and by carcass quality grade in 1975, 1980 and 1982. Those familiar with the U.S. beef market might be surprised to find such large price differentials between Wagyu and dairy beef, and between different quality grades within the same class of animals in the Japanese beef market. Quality grade in Japan is chiefly determined by fat marbling scores. Japanese consumers have been paying, and will likely continue to pay for some time to come, incredibly high premiums for well marbled beef. Trying to obtain the price premiums, Japanese cattlemen have been extending feeding periods for the past 10 years or so, even for dairy steers which may not be suited for marbling. Mixed grain rations for beef cattle cost $229 per ton at farm level in 1982 compared with about $120 in the United States for the same period.

It seems a sizeable market opportunity exists in Japan for highly marbled U.S. fed beef (U.S.D.A. Top Prime or above) from carefully selected cattle fed 100 to 120 days longer than the traditional feeding period of 120 to 150 days. The Japanese market for beef corresponding to 2nd and 3rd grades of Wagyu beef and top grade of dairy beef, is estimated at about 150,000 metric tons, carcass basis, under the present price level, and 30 to 40% more if the price declined in absence of import quotas (Coyle, ERS/USDA, p. 61 and Longworth, pp. 275-278).

The Bureau of Livestock, Ministry of Agriculture, Forestry and Fisheries (MAFF) has recently launced a nationwide campaign to shorten the feeding period, especially for dairy steers, in order to lower the cost of production of beef and thus, hopefully, increase net return for family labor. Whether a good portion of beef producers will do so or not might

Table 2. Average wholesale carcass price, by class and by quality grade, in 1975, 1980 and 1982, Tokyo, Japan

Class of Animals	Year	Grade						Average
		Supreme	Superior	1st	2nd	3rd	Utility	
		(dollars[1]/lb)						
Wagyu Heifers & Cows	1982	6.14	4.79	4.09	3.28	2.49	1.82	3.30
	1980	6.37	5.10	4.36	3.59	2.84	2.07	3.87
	1975	3.56	2.84	2.47	2.13	1.80	1.35	2.33
Wagyu Steers	1982	5.15	4.50	3.89	3.29	2.66	1.96	3.54
	1980	5.53	4.86	4.27	3.66	2.91	2.16	4.04
	1975	3.10	2.71	2.43	2.13	1.83	1.48	2.33
Dairy Steers	1982	-	-	2.79	2.36	2.14	1.57	2.28
	1980	-	(3.95)[2]	3.19	2.63	2.40	1.76	2.53
	1975	-	(2.51)	2.05	1.83	1.64	1.26	1.72
Dairy Cows & Heifers	1982	-	(3.71)	3.00	2.43	1.99	1.56	2.01
	1980	(5.34)	(4.11)	3.41	2.74	2.12	1.63	2.11
	1975	(2.74)	(2.37)	2.07	1.86	1.53	1.25	1.47

[1]Original yen prices per kg were converted into dollar price per lb. $1.00 was ¥250.2 in 1982, ¥229.1 in 1980, and ¥305.2 in 1975.

[2]The parentheses indicate price based on a negligibly small number.

Sources: Meat Marketing Statistics (various issues), MAFF.

Table 3. Percentage distribution of slaughter cattle, by quality grade within classes of animals and percentage distribution by class of animals, 1975, 1980, and 1982, Japan[1]

Class of animals	Year	Percentage distribution by class of animals	Quality Grade						
			Supreme	Superior	1st	2nd	3rd	Utility	Total
		(percent)							
Wagyu	1982	11.1	1.3	4.5	17.2	41.1	30.0	5.8	100.0
Heifers &	1980	13.3	2.0	6.0	24.2	47.3	18.3	2.2	100.0
Cows	1975	15.2	2.2	8.1	26.6	41.7	16.8	4.6	100.1
Wagyu	1982	17.6	1.6	4.6	19.0	52.6	21.1	0.9	100.0
Steers	1980	18.4	2.0	5.7	25.9	50.8	14.7	0.9	100.0
	1975	20.8	1.8	6.3	27.5	54.6	8.9	0.9	100.0
Dairy	1982	36.2	0	0	0.4	53.1	43.4	3.1	100.0
Steers	1980	34.5	0	0	1.0	52.9	42.5	3.6	100.0
	1975	30.7	0	0	0.7	40.5	53.5	5.3	100.0
Dairy	1982	34.0	0	0.4	2.9	25.6	43.3	27.8	100.0
Cows &	1980	33.2	0	0.4	3.9	23.9	41.0	30.8	100.0
Heifers	1975	31.8	0	0.1	1.4	17.3	43.3	37.9	100.0
All	1982	100.0	-	-	-	-	-	-	-
Cattle	1980	100.0	-	-	-	-	-	-	-
	1975	100.0	-	-	-	-	-	-	-

[1]Percentages are derived by carcass weights, not number of animals.

Sources: The Meat Statistics in Japan (various issues), MAFF.

partly depend upon the United States shipping enough of the desired quality grade to lower the Japanese market prices of top grade dairy beef to a level where a great many feeders would find it not profitable to continue their practice of feeding dairy steers or heifers for as long as 13 to 16 months. At any rate, it seems to authors that it may be a great waste of energy to keep dairy steers or heifers which are not suited for marble production on expensive imported feedstuffs for 3 to 5 months after they have passed their maximum feed efficiency. It may be more so if some selected U.S. beef cattle can be marbled by keeping them on much less expensive feed grains domestically produced 3 to 4 months longer than being practiced now.

ANALYSIS OF PROBABLE COSTS AND RETURNS OF LONGER FEEDING PROGRAMS

The possible success of our proposed program of feeding U.S. cattle for longer periods depends upon the increase in feeding costs relative to the increase in prices received. Because this program has not been tried, we must deal, at least in part, with estimates and assumptions to demonstrate profit possibilities. The factors of importance are: 1) what Japanese quality grade and corresponding price typical U.S. cattle of low Choice[6] equate to, 2) what Japanese quality grades and corresponding prices would U.S. longer-fed cattle equate to, 3) what are the increased costs of the longer feeding period, and 4) what processing and transportation costs, tariff duties, and other import charges and fees may apply.

It is assumed that the LIPC will continue to take a levy of about $0.54 per pound on imported beef.[7] The following budget analysis also assumes present tariff rates, freight, insurance and import charges apply.

Estimated Prices

Carcasses from beef animals fed high-concentrate diets for about 260 days might be expected to obtain the following Japanese quality grade and price distribution:

Quality Grade and Class	Average wholesale carcass price[8]	Percent of total animals marketed
2nd grade of Wagyu steers	$3.29/pound	20
3rd grade of Wagyu steers	2.66/pound	40
2nd grade of dairy steers	2.36/pound	25
3rd grade of dairy steers	2.14/pound	15

The above results in a weighted average wholesale carcass price of $2.63 per pound in the Japanese market. Allowances for LIPC levy, import tariff, import fees and transportation charges results in a average carcass price f.o.b. Amarillo, Texas of $1.36 per pound.[9]

On the other hand, the average wholesale price in the Japanese market of U.S. beef carcass, low Choice grade, was estimated at $2.14 per pound in 1982. Allowances for miscellaneous levies and charges result in an average carcass price f.o.b. Amarillo, Texas price of $1.00 per pound, lower than the 1982 wholesale carcass price in the Southwest, $1.06 per pound. Most U.S. packers must not have found it profitable to export their beef to Japan, except for the lower value short plates, square cut chucks and brisket which account for 80 to 90% of beef exported from U.S. to Japan at present.

Estimated Cost of Longer Fed Animal

Large frame yearling steers selected from herds with known marbling ability would probably be best suited for feeding high-energy diets for periods as long as 260 days. Animals fed to heavier weights and to higher degrees of finish, cost more to feed per pound of gain than for the same animals fed for shorter time periods. For budgeting purposes, it was

assumed the animals will have a feed conversion ratio of 9.5 pounds of feed per pound of gain for the first 400 pounds, and fall off to 12.5 to 1 for the next 270 pounds of gain.

The breakeven cost to feed yearling steers for about 260 days is estimated at $1.25 per pound, dressed carcass basis.[10]

Cost-Price Comparison

Based on the following summary cost-price comparison, it appears a profit of $.08 per pound or $69 per carcass may be possible.

	dollars per pound
Expected average carcass price	1.36
Feedlot costs	(1.25)
Slaughtering and processing costs[11]	(.09)
Credit for by-product value[11]	.06
Estimated profit	.08

This profit projection may not be enough to clearly indicate the idea is financially feasible, given the possible risks and uncertainties involved. However, it demonstrates that it may be a viable program and is worthy of further research and possibly a market demonstration.

Potential Market Volume

The potential market volume is not known but we estimate it may range from 30,000 to 50,000 metric tons per year for the time being. This may not be enough to fit the merchandising policies of major U.S. beef packers. However, we believe it may be of interest to many individual cattle feeders and smaller beef packing companies looking for a strategy that would allow them to survive in the highly competitive beef processing industry.

IF THE TRADE WERE LIBERALIZED

Several years from now, beef exports to Japan might be liberalized, if not completely, at least with a variable levy which would probably be higher than the present 25% tariff.[12] Prices of beef from dairy cattle, 2nd, 3rd, and Utility grades, which compete directly with imported beef, might decline more than top class dairy and Wagyu cattle. Prices of these lower grade beef are likely to fall by about 25% (price of 3rd grade of dairy steer down to $1.60[13] per pound which is equivalent to c.i.f. prices of the best Australian chilled beef plus expected import tariff (tentatively assumed to be 40% of c.i.f. prices), and import charges of 10% (Longworth, p. 197). This implies the wholesale value of low Choice grade U.S. frozen beef, in the Japanese market, would be about $1.60 per pound, carcass basis. If so, the f.o.b. Amarillo derived price for U.S. low Choice beef would be $0.88 per pound, carcass basis. U.S. packers would not find it profitable to export beef to Japan at $0.88 per pound, considering wholesale prices of Choice steer carcass beef in Amarillo ranged from $1.00 to $1.02 per pound in 1982.

We may safely assume that wholesale prices of Wagyu beef and top grades of dairy cattle would be less severely impacted by the anticipated trade liberalization. We expect prices of these grades to decline, say, about 15%, although we cannot be sure about this. If so, f.o.b. derived Amarillo prices of longer-fed beef cattle under our proposed program would be $1.27 per pound of carcass weight. This price is 1 cent per pound lower than the breakeven price calculated earlier. However, we should recall that many cattle feeder incurred losses of 10 cents, or more, per pound in 1982-83 when Choice dressed beef prices ranged from $1.00 to $1.02 per pound in the Southwest.

ENDNOTES

[1]Including several thousand tons imported under other than H.Q.B. quota.

[2]Coyle says, "one view is that the U.S. share would increase under free trade because U.S. grain-fed is overpriced in the Japanese market in comparison with grass-fed beef." But he fails to present statistical evidences to support this view (Coyle, Q.J.R.E., pp. 252-253).

[3]Australia has a comparative advantage relative to the United States in supplying grass-fed beef and short-time, grain-fed beef due to cheaper feeder stock, whereas the United States has an advantage in longer-time, grain-fed, beef with superior feeding technology and greater risk-bearing capacity because of the large domestic market for grain-fed beef.

[4]Longworth states, "The main beneficiaries of liberalizing Japanese beef imports would be Australia. Completely free-trade in beef would severely reduce the need for Japan to import feedstuffs, from the U.S." (Longworth, pp. 298-300).

[5]Longworth states, "the best frozen U.S. beef imported into Japan as H.Q. beef may almost correspond to 1st grade domestic dairy steer beef. This meat is even promoted to the rank of "Kobe" beef in some hotels and restaurants" (Longworth, p. 163). We have reasons to believe he may be over-evaluating the quality of U.S. beef.

[6]There is no incentive for U.S. packers to supply higher Choice beef to Japan under the present LIPC purchasing plan (see Mori, p. 10).

[7]The LIPC earned a net profit margin of ¥566 per kg of imported beef (mostly in boxed primal cuts) during the 1978 Japanese Fiscal Year. It earned ¥396 for JFY 1979, ¥287 for JFY 1980, and ¥344 for JFY 1981 (LIPC, Dower, personal communication). According to our calculation, LIPC earned

substantially greater profit margins on beef from Australian than that from the United States (see table 1).

[8]Based on average wholesale prices for 1982 in Japan.

[9]This figure was based on an LIPC levy of $.54/pound, transportation and freight charges of $.19/pound, tariff and other import charges of 25 and 10%, respectively, c.i.f. Japan. Tariff and import charges are assessed before the $.54 LIPC levy. The formula used is as follows: f.o.b. Amarillo price = (Japanese wholesale price - LIPC levy)/(1.00 + 0.25 + 0.10) - transportation and freight charges = [($2.63 - $0.54)/1.35 - $0.19]/lb.

[10]Assumptions are as follows: in-weight 690 pounds, finish weight 1,360 pounds, gain 670 pounds, feeder steers priced at $64 per cwt., average ration cost including all handling costs and yardage fees at $150 per ton, initial feedlot treatment cost at $10 per head, interest at $73 per head (15% a year), death loss at 3.125%, dressing percentage at 63.5% (based on personal communication with feedlots and packing plants in New Mexico).

[11]W. R. Grace & Company.

[12]EC charges 20% normal tariff plus variable levy on beef imports, both of which combined are estimated to be equivalent to 90% of c.i.f. prices in 1979 and 75% in 1981 (MAFF, p. 45).

[13]Longworth might argue that this price prediction is a bit too high with the assumption of 40% tariff. If the price goes down below this level, there will be little chance U.S. beef exports to Japan can survive the trade liberalization without some sort of export subsidies.

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