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The Effects of Beef Import Liberalization on its Consumption, Distribution and Production in Japan

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A study was carried out on the possible effects of Japan's beef import liberalization program, which was implemented in April 1991, on (1) the needs of consumers; (2) retailers' sales strategies; and (3) the profits of cattle-fattening farms, cattle-breeding farms and dairy farms. The study also covered the future problems likely to arise in these sectors due to liberalization.

The study indicated that although beef import liberalization has its merits from the consumers' and retailers' points of view, the short-term bad effects on cattle-fattening farms, cattle-breeding farms and dairy farms would be very serious.

To maintain the development of domestic beef production, it is important that the following policies be enforced: (1) ensure the productivity of land which is the base for producing low cost roughage, (2) long-term low-interest funds to ensure the stability of farms, (3) improve the price stabilization system for dressed carcasses, feeder calves and feed, (4) establishment of an organization for wide dissemination of embryo transfer and similar techniques, (5) promotion of milk production combined with steer production, (6) rationalization of distribution for male new-born calves, feeder calves, fattened cattle and beef, and so on.

PROBLEMS AND METHODS

The objective of the present paper is to analyze the possible effects of Japan's beef import liberalization program, which was implemented in April 1991, on (1) the needs of consumers; (2) retailers' sales strategies; and (3) the profits of cattle-fattening farms, cattle-breeding farms and dairy farms. This report will also study the measures that will have to be taken in these sectors to cope with liberalization.

Thus this paper first analyses the effects of beef import liberalization in the respective sectors in three ways; (1) on the basis of a questionnaire survey aimed at consumers regarding beef import liberalization; (2) an interview survey aimed at retailers; and (3) an actual survey of the situations at cattle-fattening farms, cattle-breeding farms and dairy farms. Then, by studying the analytical results thereby obtained, general measures to cope with liberalization are examined.

CHANGES IN CONSUMERS NEEDS AND THEIR VIEWS REGARDING IMPORT LIBERALIZATION

A questionnaire survey was carried out regarding consumer purchasing behavior in order to predict changes in consumers needs following beef import liberalization. In order to ascertain the situation prior to liberalization, a detailed survey was completed by 206 consumers in Fukuoka City. In addition, in order to predict the evolution of consumers needs following liberalization, a detailed survey was completed by 155 consumers in Okinawa Prefecture [5]. In the case of Okinawa, 90% of the beef consumed is already imported beef because of the stipulations in the so called law entitled "Special disposition pertainig to the return of the territory from America."

When respondents in Okinawa were asked about their sentiments regarding imported beef as far as taste is concerned, 35% said it was "good" and only 1.7% said it was "bad". In Fukuoka, however, those replying "good" represented 14.7%, but 20% said it was "bad". Regarding quality, those in Okinawa replying "good" amounted to 22.9% with those replying "bad" amounting to not more than 3.4%. In Fukuoka, "good" represented 13.3% and "bad" represented 12%. Thus we see that replies in Okinawa, where liberalization is already in effect, comparatively are more favorable than those in Fukuoka regarding the taste and quality of imported beef.

Our country's beef prices can be said to be generally high. What are these current price levels, and around what level would consumers like them to be in the future? In Fukuoka, the price per 100 grams in the form of sliced beef is around ¥350, while in Okinawa it is frequently around ¥200. However, it is anticipated that in the future with beef at ¥200 in Fukuoka, it will be around ¥150 in Okinawa.

When asked for their views "on the decision to liberalize beef imports", 43.2% Fukuoka's respondents replyed that they thought it "a good thing", whereas in Okinawa only 37.0% thought so.

From the above consumer survey, it is evident that it is important to be able to produce good taste beef at a low cost if domestic production is to survive.

RATE OF MARGIN FOR BEEF RETAILERS AND THEIR FUTURE STRATEGIES

In recent years, even in retail meat sales, the share held by large scale retailers and department stores has been high. Let us study the purchase price, the selling price and the rate of margin of large scale retailer "A". The purchase price per kilo of Wagyu cut meat is ¥2,650. As the yield when this cut meat is transformed into sliced meat is 81.5%, the effective cost price of the meat thus sold is ¥3,250 per kilo. And as the actual selling price is ¥4,750 per kilo, the margin rate is 31.6%. In the case of dairy beef, cut meat is purchased at ¥1,970, and the yield rate in terms of sliced meat sold at ¥3,440 per kilo is 86.2%, so the margin rate is 33.6%.

In the case of department store "B", domestically produced beef is purchased in the form of dressed carcasses, while imported beef is purchased in the form of cut meat. For wagyu and dairy beef produced domestically, the margin rates are 23.6% and 29.9% respectively. The margin for imported U.S. beef is 33.8% and for Australian

Table 1 Present situation at large scale retailer "C" and future sales strategy

	At present		After beef import liberalization	
	Ranking of best selling lines in terms of quantity sold	Unit price of best selling lines(¥/100g)	Ranking of best selling lines in terms of quantity sold	Unit price of best selling lines(¥/100g)
	(Ranks 1~6)		(Ranks 1~6)	
Domestic Wagyu	4	480	4	480
Domestic dairy	1	350	3	300
U.S.A.(Chilled)	2	350	2	300
U.S.A.(Frozen)	5	280	5	200
Australia(Chilled)	3	300	1	280
Australia(Frozen)	6	180	6	150
Pork		120		100
Chicken		90		80

Source : Compiled from unpublished data for large scale retailer "C".

beef is 39.8%. As high margins are obtained with imported beef which is purchased at low prices, one can understand why retailers wanting to handle imported beef. However, the higt margin is one reason why the imported beef price is not dropping by much from the consumers' point of view. It is also a major reason behind the consumers' reluctance to purchase it. On a nation-wide level, this high margin is also why imported beef, recently arriving in large quantities over a short period, is accumulating at a level of about 110,000 tons.

Therefore, it will be necessary to study the sales strategy of large scale retailers. Table 1 shows the sales presently being achieved by large scale retailer "C" with 257 outlets throughout Japan, handling 26,140 tons of meat. It also shows their future strategies. At the moment, the best-selling beef is domestic dairy beef selling at ¥350 per 100 grams. Large scale retailer "C" intend to discount this to ¥300 following import liberalization. Furthermore, they intend to sell American chilled beef currently selling at ¥350 at the reduced price of ¥300. And to sell Australian chilled beef currently selling at ¥300 at the reduced price of ¥280. On the other hand, though Wagyu is now being sold at ¥480, they plan to keep that selling price unchanged in the future.

THE EFFECT OF BEEF IMPORT LIBERALIZATION ON CATTLE-FATTENING FARMS AND FUTURE DEVELOPMENT

Cattle-fattening farms make their purchases of feeder calves at calf auction markets. In the case of Wagyu, the animal is sold after a fattening period of approximately 19 months. In the case of dairy beef, it is sold after being fattened for approximately 14 months. The price of Wagyu feeder calves is getting relatively high. So what is happening to the profit of cattle-fattening farms purchasing high-priced calves for fattening? In order to answer this question, the relationship between profits, dressed carcass prices, and feeder calf prices for such cattle-fattening farm is analyzed

in Fig.1 on the basis of the data from a Ministry of Agriculture, Forestry and Fisheries' Production Cost Survey Report.

The survey examines the situation of the average Wagyu fattening farm which purchases feeder calves at ¥500,000. If these cattle can be shipped (sold) after fattening at the current average price for dressed carcasses of ¥2,000 per kilo, the "family labor income per day" works out at approximately ¥8,000. If beef import liberalization brings about a 20% drop [4][9] in the average price of dressed carcasses to ¥1,600, the predicted family labor income per day will be negative at −¥15,500. Thus, if beef import liberalization brings about such a fall in dressed carcass prices, cattle-fattening farms will be faced with a short term operation crisis. The Wagyu fattening farms business must try and see that the prices for Wagyu dressed carcasses do not go lower than ¥2,000 per kilo.

Now, let us examine the profit of an average dairy beef farm purchasing feeder calves at ¥240,000 per head. If the present dressed carcass price of ¥1,300 per kilo falls by 20% to ¥1,040 on accout of beef import liberalization, the family labor income per day will negative at −¥73,000. Thus, if beef import liberalization does actually produce such a fall in dressed carcass prices, these farms will be faced with a short term serious operation crisis. Consequently, in the future it is important that dairy beef fattening farms try to ensure that dressed carcass prices for dairy beef do not go lower than ¥1,200 per kilo.

In the short run, Wagyu fattening farms, just like dairy cattle fattening farms, will suffer extremely bad effects from beef import liberalization because they are currently purchasing high-price feeder calves for fattening. However, as will be explained, in the long run, feeder calf prices should fall, mitigating the effects of import liberalization. Nevertheless, even then, producing high quality beef will be an indispensable condition

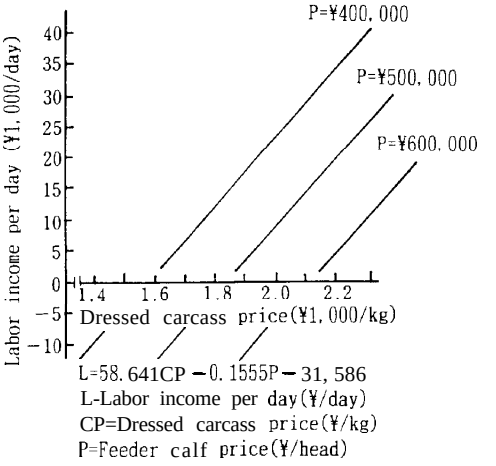

Fig.1 Relationship between feeder calf price, dressed carcass price and labor income per day for Wagyu fattening farm
Source : "Report on Survey of Livestock Production Costs" 1989, Ministry of Agriculture, Forestry and Fisueries.

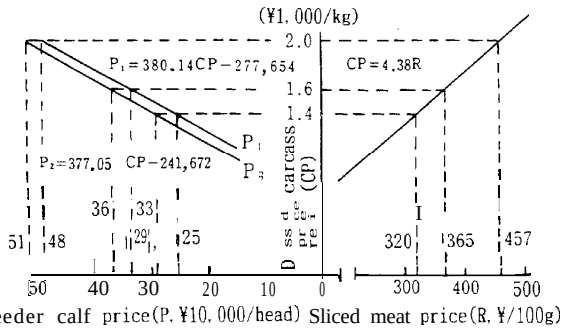

Fig.2 Relationship between prices of sliced meat, dressed carcass and feeder calves for Wagyu
Note : P_1 is formula for a 14-head scale Wagyu fattening farm, and P_2 is for a 69-head farm.
Source : Same as for Fig.1.

for making production profitable again.

THE EFFECT OF BEEF IMPORT LIBERALIZATION ON CATTLE-BREEDING FARMS AND FUTURE DEVELOPMENT

The business aim of cattle-breeding farms is to sell the feeder calves produced for fattening farms. Therefore, their particular concern is how feeder calf prices will change in the future. Let us now examine the relationship between sliced meat prices at the retail level, dressed carcass prices at the wholesale level, and calf auction market prices in the light of Fig.2 based on the data from a Ministry of Agriculture, Forestry and Fisheries' Production Cost Survey Report. In producing this figure, the following assumptions were made; (1) the total distribution margin of wholesalers and retailers is 27%, (2) the yield in terms of weight when dressed carcasses are transformed into sliced meat is 60%, (3) in order to keep a "family labor income per day" at least ¥6,000 which is an average level of part-time wages per day in rural areas, cattle-fattening farms have to purchase feeder calves produced by cattle-breeding farms at calf auction markets.

In the case of Wagyu, the average retail price for sliced meat is presently Y457 per 100 grams. At this level, if one takes the above-mentioned distribution margin and yield, the price works out at about the same price as the dressed carcass price of ¥2,000 per kilo. For it to be possible to sell fattened cattle at a dressed carcass price of ¥2,000, the cattle-fattening farms must be able to purchase feeder calves from the cattle-breeding farms at around ¥500,000 per head. Thus cattle-breeding farms can sell feeder calves at ¥500,000 and continue operation without undue worry. However, if the dressed carcass price falls by 20% because of beef import liberalization, dressed carcass will be sold at ¥1,600. And if we assume that the above distribution margins apply, the retail price will fall to Y365. If dressed carcasses were sold at such a price

level, the cattle-fattening farms would be unable to maintain their family labor income per day at the ¥6,000 level unless they purchased their feeder calves at ¥350,000 per head. In view of this, there is the danger that feeder calf prices that have risen to ¥500,000 will drop to ¥350,000 if dressed carcass prices fall by 20% because of beef import liberalization.

The guaranteed standard price under the Ministry of Agriculture, Forestry and Fisheries' deficiency payment system introduced in April 1990 is ~304,000 in the case of Wagyu feeder calves. But, as there is little danger of feeder calf prices falling lower than ¥350,000 as detailed above, it is unlikely that the deficiency payment system will be applicable.

Nationally the average secondary production cost of Wagyu is ¥420,033 per head (Fiscal 1988). Therefore, in the future the most important development objective is to reduce this cost to ¥350,000.

THE EFFECT OF BEEF IMPORT LIBERALIZATION ON DAIRY FARMS AND FUTURE DEVELOPMENT

The total amount of beef consumed in Japan in 1988 calculated on a cut meat basis was 690,000 tons, of which 42% was imported, 39% was dairy beef, and 19% was Wagyu and so on. It can thus be seen that dairy beef production represents a very large proportion. It should be noted that dairy beef is produced through the following process: (1) the dairy farms or livestock dealers send the male new-born calves about 7 days after birth to the livestock auction market, (2) they are then purchased by dairy steer raising farms, (3) after being castrated and raised for about 6 months, they are sent again to the livestock auction market as feeder calves, (4) they are then purchased

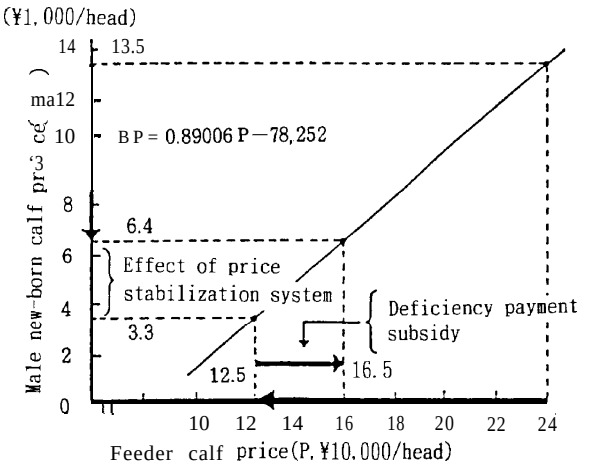

Fig.3 Relationship between dairy beef beeder calf price and male new-born calf price
Source : Compiled from unpublished data of the Ministry of Agriculture, Forestry and Fisheries.

by cattle-fattening farms, (5) after being fatted for 14 months they are sent to the dressed carcass market.

Thus, the fall in dressed carcass prices, one of the possible effects of beef import liberalization, will work up backwards through this distribution process so the price of male new-born calves from dairy farms will be brought down [4][5][6]. The already mentioned 20% drop in dressed carcass prices for dairy beef would bring the price of feeder calves down from ¥240,000 to ¥120,000. Paralleling that, the price of male new-born calves would fall precipitously from ¥135,000 to ¥33,000 as shown in Fig.3. However, under the deficiency payment system for feeder calves implemented in April 1990, a subsidy will be paid up to ¥165,000 for dairy feeder calf per head. Consequently it is estimated that the price for dairy farm male new-born calves will actually bottom out at ¥69,000. Already the price of those calves has fallen sharply since the end of July 1990.

CONCLUSION

The result of the study can be summarized as follows:

(1) A survey of consumers' views regarding imported beef in Okinawa, where liberalization is already in effect, produced favorable responses. There is the possibility in the future that the same situation will also develop on the Japanese mainland. Thus the optimistic view held by some people that imported beef will not be a match for domestic beef is untenable. Therefore it is essential that efforts be made to produce a product clearly distinct from imported beef in general.

(2) As margins at the retailers' stage for imported beef are higher than those for domestic beef, retailers obviously want to expand their sales of imported beef. These high margins give consumers the impression that imported beef is expensive. And are one reason why there is an excess inventory of imported beef piling up.

(3) Wagyu beef fattening farms currently purchasing feeder calves at ¥500,000 per head risk being faced with a short term operation crisis if they are unable to maintain dressed carcass prices at, or above, ¥2,200 per kilo. Also, an essential condition for dairy cattle-fattening farms (currently purchasing feeder calves at ¥240,000) to remain profitable is that the dressed carcass price not be allowed to fall below ¥1,200. In the long run, feeder calf prices will fall. However, if the absolute value for the desirable dressed carcass price changes, it will not alter the fact that producing high quality beef is important.

(4) In view of the danger of Wagyu feeder calf prices falling from ¥500,000 to ¥350,000, it is necessary to pare the Wagyu feeder calf production cost down to that level.

(5) In the case of dairy farms, the price of male new-born calves has already dropped from ¥135,000 to ¥70,000 thus reducing income. Therefore, it is important to promote the combination of steer production and dairy operations.

Examining the above results as a whole, one can say that, in order to maintain and develop domestic beef production in future, it is necessary to supply high quality beef at a low cost that can clearly be differentiated from imported beef. To do that, it is important that the following policies be enforced: (1) ensure the productivity of land which is the base for producing low cost roughage, (2) long-term low-interest funds to ensure the stability of farms, (3) improve the price stabilization system for dressed

carcasses, feeder calves and feed, (4) establishment of an organization for wide dissemination of embryo transfer and similar techniques, (5) promotion of milk production combined with steer production, (6) rationalization of distribution for male newborn calves, feeder calves, fattened cattle and beef, and so on.

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