BEEF PRODUCTION IN JAPAN

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SUMMARY

Japan is an important importer of Australian beef. Australia and north America have considerable cost of production advantages over Japanese beef producers. The structure of the Japanese industry and current trends are discussed in what is a period of change following liberalization.
Keywords: beef, Japan, liberalization.

INTRODUCTION

Food consumption in Japan has seen rapid changes this century as both the amount and range of foodstuffs available has increased. In the period 19 1 l-l 9 15, 85% of calorie consumption came from starch foods and rice accounted for 59% (MAFF 1991a). At that time, livestock products accounted for less than 1% of calorie intake and protein consumption. Consumption of livestock products, fats, oils and sugar increased rapidly from 1960 with protein from livestock products now accounting for 30% of protein intake. These livestock products include chicken, eggs, pork, beef, dairy products, mutton and lamb as well as meat from other animals. A large proportion of these products are imported (Table 1). The most rapid changes in dietary habits have taken place since the end of World War 2 and have been associated with the remarkable improvement in living standards accompanying economic develonment.

Table 1. Meat production and imports to Japan in 1989 (10^3 x tonnes)

Chikusan Kankei Shiryou (1991)

Product	Domestic	Imports	Consumption
Beef	539	520	1059
Pork	1597	523	2120
Horse	4.6	58	63
Sheep	0.3	110	110
Poultry	1423	290	1713

The level of self sufficiency (proportion of consumption produced domestically) in beef is less than that of pork and chicken, but higher than that for horse and sheep meats. Self sufficiency level (also known as food security) is a key indicator used by organizations concerned about import levels of foods to Japan.

THE JAPANESE BEEF INDUSTRY

The Japanese beef industry has developed from a cottage industry, where cattle served as sources of power and manure for crops, to one where large domestic corporate operations supplemented with extensive investments overseas dwarf the production of the many family farms. Over 65% of beef produced in Japan is a by-product of the domestic dairy industry based on the Holstein (Chikusan Nippo 1991*a*). The remainder is from Wagyu breeds which includes the Japanese Black, Japanese Brown and a number of minor breeds (Namikawa 1985). Although farm size has been increasing over the past 20 years (MAFF 1991*b*), the 2.8 million beef cattle (including Holsteins raised for beef) are divided among 221000 holdings making an average 12.6 head per holding in 1991 (Chikusan Gijyutsu 1991*a*). This is an overall industry figure and statistics are quite different if partitioned into breeding and finishing operations. In 1989, 82% of Wagyu breeders had between 1 and 4 head (with 60% having 1 or 2 head) and this accounted for 48% of the breeder population. Only 52% of breeders were in herds of 5 or more. The scale of Wagyu finishing operations is larger with 25% of feedlots having more than 9 cattle. The 11% of feedlots with over 30 head capacity, however, accounted for 63% of the industry. Where corporations have entered into the feedlot sector of the Japanese beef industry, there has been a disinclination for them to enter the breeding sector. The aging of the farming population and the

disinclination of young Japanese to enter the industry means that the number of establishments carrying livestock is diminishing rapidly. Between 1984 and 1989, the number of establishments carrying breeding herds declined from 240 000 and most of his decline occurred amongst small herds (MAFF 1990).

Land is limited in Japan and available land is cropped for rice and vegetables. Grazing enterprises are uncommon apart from parts of northern Japan, Kyushu and some offshore islands. Breeding cows survive on rice straw, grass cuttings from around the rice paddies and small quantities of prepared feeds. Calves are fed similar feeds with higher levels of concentrates. Concentrates are commercially prepared feeds largely made from imported feedstuffs and byproducts of human food manufacture. Wagyu calves are fed until 9 months of age (280 kg) when they are sold to feedlots. Price at this time varies according to source, between 1000 and 2500 yen per kilogram. Cattle feeders are given information on the breeding of feeder cattle and pay a premium for calves with superior genetics. The average price received by Wagyu breeders in July 199 1 was 489 000 and 404 000 yen per head for steers and heifers respectively ($A3500–4500). Holstein breeders received an average price of 499 yen per kg for 6 month old calves (255 kg, 127 000 yen/head) (Chikusan Nippo 199 lb). Breeders receive a subsidy for calves.

Costs of production are surveyed annually by the Japanese Ministry of Agriculture, Forestry and Fisheries (MAFF). Tables 2 and 3 show the results of that survey for Wagyu calf producers in 1989 (the breeding industry) and for Wagyu and Holstein feedlots in 1990 (the finishing industry).

Table 2. Costs of production and value of sales of Wagyu feeder cattle in Japan (1000s yen/head)

Family reward of 158000 yen/calf includes the value of family labour. Most producers are part-time and MAFF calculates the family reward (9200 yen/day) on the basis of an 8-h day from statistics on labour requirements (Chikusan no Kenkyu 1990)

	Artificial insemination	Feed	Commercial feed	Livestock	Labour	Manure	Calf	Total
Production costs	10	172	75	44	119	—	—	420
Value of sales	—	—	—	—	—	4	500	

Table 3. Cost of production and value of sales of slaughter steers in Japan (1000s yen/head)

	Wagyu	Holstein
Feeder steer (280 kg)	474	252[A]
Feed costs	212	185
Other (bedding, power)	48	36
Labour costs	81	36
Capital costs	26	15
Total cost of production	**841**	**524**
Sale of manure	36	16
Sale of steer	912	573
Profit per head	107	65
Family reward per day [B]	15.5	22.4

[A]These data were collected for JFY 1990. Holstein calf prices averaged 129000 yen nationwide for June–August 1991 (Chikusan Nippo 1991*b*, 1991*c*, 1991*d*).
[B]Source: Chikusan Gijyutsu (1991*b*)

At the time of this survey, the average herd size was 4.5, therefore family reward for the enterprise was a little over 700 000 yen ($A6650/year).

Despite the lower per head profit for Holsteins, the higher throughput and larger scale of production result in higher family reward. Returns to dairy beef producers have declined due to the fall in price of Holstein beef. However, cost of production has also declined as the price of feeder steers has fallen. Holstein feeders steers were costing feedlots 252000 yen at the time of this survey. A year later, the same steers were costing half that. The average price received by Holstein calf producers is below the

trigger price for subsidies, and steer producers are receiving a subsidy derived from the tariff on imported beef. The trigger prices are 165, 214 and 304 thousand yen per head for Holstein, other breeds and Wagyu calves respectively. Subsidies only apply to calves between 4 and 12 months of age and are only paid to producers who have joined the scheme. The government pays a high proportion (90% in JFY 1991) of the difference between the trigger price and the average calf price nationwide up to 25, 26 and 37 thousand yen per head for Holstein, other breed and Wagyu calves respectively. All eligible producers receive the same subsidy per head sold, irrespective of the price they received in the marketplace. The producers fund makes up any additional deficit to member farmers. Only 25% of the producer fund is derived from funds contributed by producers, the other 50% and 25% comes from the beef tariff pool and local or prefectural governments respectively. Compensation level and trigger prices are set annually. Although most Wagyu producers are members of the scheme and eligible for subsidies, fewer Holstein calf producers are members of the scheme although the number is now increasing. The decline in profitability of Holstein calf production has led to a larger number of producers mating their Holstein dairy cows to Wagyu to produce Fls. There is also interest in embryo transfer of Wagyu embryos into Holsteins and twinning research and commercialization.

COSTS OF PRODUCTION IN JAPAN, USA AND AUSTRALIA

It is well recognized that the Japanese Wagyu is a unique animal supplying a top end market not available to imported beef. The middle market however is accessible to Australian and US exporters and substitution has taken place resulting in a price decline for dairy beef (AMLRDC 1990). Costs of production in Australia, the USA and of dairy beef in Japan are compared in Table 4.

Table 4. Costs of production for dairy, Australian and US beef (1000s yen/head)

	Dairy	USA[A]	Australia[A]
Feeder steer (280 kg)	252	72	44
Feed costs	185	75	63
Other costs	72	14	15
Interest	15	12	24
Feedlot total	**524**	**173**	**146**
Slaughter, boning	25	8	15
Transport		10	10
Landed cost Japan		**191**	**171**
Tariff 70%		134	120
Landing charges		18	18
Cost to wholesale market	**549**	**343[B]**	**309[B]**

[A]Calculated using exchange rates of $A = 107 yen and $US = 130 yen.
[B]These data represent cattle fed for over 300 days and slaughtered at 650 kg.

The data are only representative as there are large difference in costs between operators and Australian and US exporters do not market the same product in Japan. US exporters market beef mostly as individual cuts. Most Australian beef enters Japan as a 12 cut full set trimmed of fat as specified by the Livestock Industry Promotion Corporation of Japan (LIPC). The LIPC full set equates to 43% of carcass weight with the remainder being fat and low value trim. Domestic beef in Japan is marketed in sets which comprise 71% of carcass weight. In addition, price for by-products (trim, offal, fat bone and hide) vary between countries, from very valuable in Japan to of little value in Australia.

Australian and US beef industries have substantial cost of production advantages over the Japanese dairy beef producer. This advantage is expected to increase as tariffs are reduced in 1992 and 1993. Some reductions in costs of production in Japan are possible through further falls in prices of Holstein steers.

CONCLUSIONS

Wagyu beef will continue to be an elite product produced in small quantities in Japan. Rationalisation will continue with increases in herd sizes, particularly in the finishing sector. In the long term, increases in Wagyu production are likely due to the adoption of twinning, embryo transfer into Holsteins and the mating of Holsteins dairy cows to Wagyu. The high cost of production of dairy beef in

Japan in contrast with imported beef suggests dairy beef production will decline and wholesalers will strengthen their relationships with overseas sources of supply.

It will take some time for the industry to adapt to the new market situation. Although many in the industry have commenced rationalizing (including significant investments overseas), most appear to have taken a more cautious approach choosing to observe changes as tariffs decline over the next 2 years.

The freeing up of Wagyu semen exportation announced by MAFF recently will increase the number of Japanese corporations seeking to produce higher grade Wagyu and Wagyu cross beef offshore. This combined with tariff reductions over the next 2 years will see the rate of rationalisation accelerate.

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