

Indigenous and Introduced: How Beef-eating Acceptance Affected the Cattle Industry in Modern Japan

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Introduction

Meat, along with rice, is one of the characteristics of today's Japanese diet; although, meat consumption is small compared to the economic level, Wagyu beef, a premium beef represented by Kobe Beef, has earned a high reputation worldwide. The combination of indigenous cooking methods and newly introduced food ingredients, and the continuation of indigenous cattle rearing with the introduction of Korean cattle, are the prehistory of the beef industry in Japan. This paper focuses on the impact of the spread of beef-eating in modern Japan on the development of the cattle industry.

The works of Cwiertka and Majima are English treatises dealing with the reception of meat-eating in modern Japan.¹ Both studies focused on how the formation of the nation-state in modern Japan has been reflected through changes in food consumption through an analysis of the discourse and public consciousness surrounding meat eating. Rather than focusing on discourse and identity, this paper will focus on the cattle as a living body.

The emphasis in the expression of “the cattle as a living body” is to discuss beef, not only the foodstuff but also the preliminary matter, the cattle. In Japan, cattle were not just a source of meat, but an important means of production for farmers. Most rice paddy farmers owned only a single bovine, and multi-cattle rearing was solely practiced in a few sections of the breeding regions. The spread of meat eating forced a change in the cattle rearing system, as cattle already existed in Japan before the Meiji Restoration as working animals that plowed the fields, transported goods, and supplied fertilizers, on a scale of over one million head. The role of cattle in Japan led to their migration in the form of live cattle rather than meat. This fact calls for

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¹ Katarzyna J. Cwiertka, *Modern Japanese Cuisine* (London: Reaktion Books, 2006); Ayu Majima, “Eating Meat, Seeking Modernity: Food and Imperialism in Late Nineteenth and Early Twentieth Century Japan,” in Katarzyna J. Cwiertka ed., *Critical Readings on Food in East Asia* Vol.1 (Leiden: Brill, 2013), 111-133.

treating this theme from an environmental-historical perspective along with a dietary and economic-historical lens.

Since Braudel's work,² it has been recognized that changes in diet, which were often overlooked as minor changes in everyday life, reflect major economic and social shifts, and the number of studies focusing on the nature of social and political power in the eating behaviors of a population has been increasing. While continuing to retain this perspective, the aim of this paper is not to look for social or political factors related to the changes in food consumption, but rather to clarify how changes in specific food-related goods and technologies have resulted in economic and social changes. In the case of this paper, it is believed that clarification of specific aspects such as the genetic qualities of cattle, infectious diseases in livestock, and the feeding patterns of cattle among rice farmers will enable a new understanding of the diffusion and expansion of beef-eating in modern Japan.

Issues Concerning the Acceptance of Meat-Eating in Modern Japan: 1860s-1940s

Before the main discussion, a brief outline of beef-eating in Modern Japan will be presented.

Figure 1 shows cattle and pig carcass weights from 1894–1940. It reveals a steady increase of these carcasses throughout the modern period, albeit with some peaks. Two points should be noted separately for beef and pork. First, meat-eating in the modern era began with beef as the mainstay. Second, from 1920 to 1940, the increase in beef volumes slowed down, mainly due to the increase in pork consumption. Despite the rapid growth in pork consumption, the cattle carcass volume exceeded the pork volume every year, except in 1936. The process of the meat-eating expansion in modern Japan will be examined, with a focus on beef-eating, as it is believed that beef is the symbol of modernity, both in terms of consumption patterns and quantity.

² F. Braudel, *The Structures of Everyday Life: Civilization and Capitalism, 15th to 18th Century* Vol.1 [Les Structures du quotidien: Civilisation matérielle, économie et capitalism, XV^e - XVIII^e siècle vol.1] (Paris: Armand Colin, 1967).

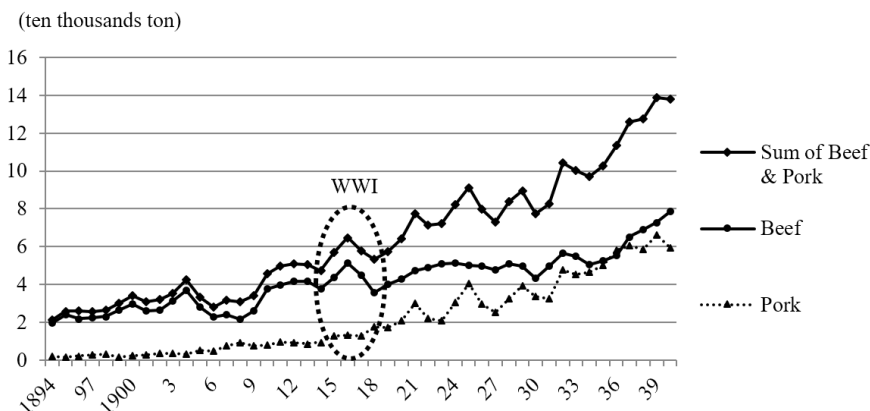


Figure 1. Trends in Meat supply in 1894-1940

* The Values were the weight of the carcass, not the edible portion weight. Source: Agricultural Policy Research Commission 農政調査委員 ed., *Revised Basic Statistics on Japanese Agriculture* 改訂日本農業基礎統計 (Tokyo: Nohrin Toukei Kyokai, 1977), 256.

An important study is Harada Nobuo's *Rice and Meat in History*.³ This study traces the process of policy-driven rice farming and the elimination of meat-eating from Ancient Times to the Early Modern period in Japan. The centralized state established by the Taika Reforms (大化の改新), in 646 CE, placed Buddhism, with its prohibition of killing, as the pillar of national protection, and established a taxation system for the rice field allotment system, seeking a foundation for rice farming. The process by which the tenets of "sacred rice, under the control of the emperor" and "meat" being "opposed and excluded" was strengthened throughout the medieval and early modern periods and intertwined in a multidimensional way with changes in the political order, social norms, agricultural productivity, and national territory. However, Harada's analysis focuses on the medieval period, and modern meat-eating is largely based on the common theory that the emperor lifted the ban on the Western model of meat-eating.

When considering the continuity of life and physicality of food behavior, a sudden turn of political power alone cannot be a convincing explanation for the changes in consumption patterns concerning meat-eating. Harada also points out that even in the early modern period, when the prohibition of meat-eating reached its peak, there was a loophole in the system in the form of medicinal eating. Harada analyzes meat-eating in the early modern period from a "mentality" aspect, arguing that the ideology of abstinence from meat-eating was internalized in the course of the distinction between the "true intention" of eating meat and the "stated reason." He

³ Harada Nobuo, *Rice and Meat in History* 歴史の中の米と肉 (Tokyo: Heibon-sya, 2005).

points out the following two aspects of the transition from the early modern period to the modern period. The first is the continuity in the behavior of meat-eating, and the second is the continuity in the “mentality,” in which the internalized aversion to meat-eating remained in the form of discrimination against slaughtering and eating offal.

From a different perspective, namely, the production and supply perspective, it is important to note that medicinal eating in the early modern period was centered on game meat. The reason is that the meat diet, since the modern period, has consisted mainly of livestock meat (beef, among others) rather than game meat, and the shift from a pre-modern game diet to a modern livestock diet required the establishment of a new meat production and supply system.

Beef Eating during the Civilization and Enlightenment Period

There are several landmark periods when considering meat-eating in modern times in Japan. The first period of the epoch was the early years of the Meiji era (1868–1912), and the period of Civilization and Enlightenment 文明開化.⁴

The new Meiji government adopted a number of Europeanization policies to portray cultural similarities with Western countries and revise unequal treaties for diplomacy. The prevailing understanding was that the eating of meat by the emperor, reported in January 1872,⁵ symbolized this portrayal. However, while the government envisioned Western cuisine when it referred to meat-eating, what was actually widely consumed as a symbol of civilization and enlightenment was the beef hot pot (gyunabe 牛鍋), a traditional method of cooking and eating that incorporated the use of a new ingredient, beef. A popular illustrated novel *Aguranabe* 安愚楽鍋, depicting the people who gather at a beef hot pot restaurant, became an instant bestseller from 1871 to 1872, and what followed was a beef hot pot boom.⁶ This is an indication of the multilayered nature of meat-eating in modern

⁴ Noma Mariko, “The process of accepting meat in modern Japan: stewed meat stands, gyunabe and Western food 近代日本における肉食受容過程の分析：辻売、牛鍋と西洋料理,” *The Journal of Agricultural History* 農業史研究 40 (2006), 77–88.

⁵ *Newspaper Magazine* 新聞雑誌, January 24th, 1872. “In Japanese imperial court, we have been banned from eating meat ever since, the Emperor, however, felt that it was an unforgivable thing to do, and it was decreed by his court that he would now eat meat.” Nakayama Yasumasa ed., *Meiji Edition of the New Newspaper Collection Vol. 1: The Restoration Revolution Period* 新聞集成明治編年史 第1巻: 維新大変革期 (Tokyo: Honpou Shoseki, 1982), 429.

⁶ On the detailed analysis of *Aguranabe*, see Kim Sunghee “Taste of Civilization: The Acceptance of Beef appeared in *Aguranabe* in the Early Meiji Era,” *The Korean Journal for the History of Science* 44: 2 (2022), 459–474.

Japan that could not simply be explained by the acceptance of Western culture and the politically-driven introduction of meat.⁷

It was the “rationale” and “deliciousness” factor that made the beef hot pot boom possible during the display of civilization to the outside world, which was a complete turnaround from the previous abhorrence of (beef) meat-eating. While it is true that the association with Western imagery played a major role, it should not be overlooked that Western imagery also served as a powerful argument against meat-eating in the midst of the lingering atmosphere of antiforeign sentiment. Moreover, against the backdrop of the time when scientific thought was in vogue, once filtered through the sieve of “rationale,” meat-eating was seen as a natural providence that transcended mere Western imitation and emerged as indispensable for health.⁸ In addition, while the connection with Western images and explanations based on “reason” was conceptual, “deliciousness” appealed directly to the senses, and is thought to have exerted the greatest influence on the acceptance of meat-eating.

So far, only the beef hot pot and Western cuisine have been considered as parts of the meat-eating culture during the period of the display of the civilization, but there was another form of meat-eating, a stewed meat called Tsuji-uri 辻売. Tsuji-uri stewed meat was eaten while standing at a street stall instead of inside a restaurant as in the case of the beef hot pot and Western cuisine. It was rumored that Tsuji-uri’s stewed meat was very old and one could not tell when it was cooked, that even the meat of dogs and horses was mixed in it, and that the poor who could not afford to go to restaurants serving beef hot pots ate it.⁹ Although it was the same meat-based food as the beef hot pot, even during the beef hot pot boom, it was not associated with the image of “rationale” or enlightenment; it was, instead, regarded as food for the lower classes.

To summarize, there were three levels of beef eating: Western cuisine for the upper social and economic classes, beef hot pots for the middle classes, and stewed meat for the poor. Although there were differences according to the hierarchy of meat-eaters, the fact that the hot pot, a traditional cooking method, became the most popular form of beef consumption is a significant characteristic of the Japanese acceptance of meat-eating. Further, it was the widespread presence of draft cattle that supported the beef hot pot boom. The demand for beef was met by diverting beef to the meat market after the cattle had been served for arable agriculture.

⁷ A work representative of this simple explanation is Ohtsuka Shigeru, “The Civilisation and Enlightenment and Western Cuisine 文明開化と西洋料理,” in Kumakura Isao ed., *Courses in Food Culture Vol.2: Japanese Dietary Culture* 講座食の文化2: 日本の食事文化 (Tokyo: Ajinomoto Foundation for Dietary Culture, 1998).

⁸ *Treatise on Meat-eating* 肉食之説 (Tokyo: Gyuba Gaisya, 1870).

⁹ Hattori Busho, “A New Sketch of Tokyo 東京新繁昌記,” *The Complete Works of Modern Japanese Literature Vol.1* 日本現代文学全集1明治初期文学集 (Tokyo: Kohdansha, 1969), 81.

Development of Cattle Fattening in Japan

The new Meiji government encouraged meat-eating and, at the same time, the introduction of Western breeds of cattle, as well as multiple cattle rearing on pastures modeled after those in Western countries. However, the transplantation of Western-style cattle rearing failed due to the fact that it was far from the way of cattle rearing in Japan, as single bovines used for plowing and fertilizing were commonplace, as well as the outbreak of cattle plagues.

The acceptance of beef eating in the form of the beef hot pot created a preference for fatty meats suitable for hot pots. As a result, the development of fattening techniques to produce fine fatty beef was observed, keeping single-head cattle rearing coupled with the indigenous form of single cow rearing that were also used for the purpose of plowing arable land. The fact that single cattle rearing by rice farmers continued without the establishment of a dedicated beef cattle business has often been regarded as “a delay in Japanese livestock production.”¹⁰ Shiga Prefecture, which is still famous for its Oumi-Beef, was a pioneer in the field of beef fattening, having introduced the practice in the middle of the Meiji period (1868–1912), and continued to produce highly regarded beef until the Showa period (1926–1989).

Even after the fattening of cattle became a conscious practice in the mid-Meiji period, the cattle management system was not established exclusively for beef-yielding cattle, and cattle breeding continued as both a drafting and meat cattle management system. Cattle for fattening are between five and ten years old, and the condition of the cattle prior to fattening, i.e., the condition in which they are kept during the drafting period, affects the results of the fattening process. Therefore, the selection of cattle becomes important, and the most important factor in this process is the quality of the cattle prior to fattening. Pre-fattened cattle are divided into three categories according to their meat content: upper, medium, and lower ranked cattle. Upper rank refers to a well-fleshed bovine, middle rank from a medium-fleshed bovine, and poor meat from lean cows or bulls. The fattening period varies according to this classification: 100 days, 150 days, and one year, respectively. The duration of the fattening period as well as the degree of fattening differs. Table 1 shows the standard fattening feed at the end of the Meiji period in Gamo County, which was the fattening center in the Shiga Prefecture. The upper rank was fed a large amount of concentrate feed such as barley and rice bran, while the lower rank had the smallest overall volume and the largest percentage of roughage, or coarse feed.

¹⁰ A work representative of this position is National Beef Cattle Association 全国肉用牛協会, *Japan Beef Cattle Transition History* 日本肉用牛変遷史 (Tokyo: Zenkoku Nikugyu Kyoukai, 1978).

Table 1. Typical Feed Rations in Namura Village Gamo County in 1911

Fattening Rank	Typical feed rations
Upper	Barley 2 syo, Rice bran 6 syo, Grass & Straw 1.5 bundles
Middle	Rice bran 5 syo, Bran of barley or wheat 500me, Grass & Straw 2.5 bundles
Lower	Rice bran 3 syo, Grass & Straw 1 bundles

*1 syo 升 =1.8 liter, 1 me 目 = 3.75g

Source: Mochiduki Takizo, *Japanese Cattle* 日本之産牛 (Tokyo: Dai-Nippon chikugyu domei, 1911), 197-198.

Table 2. The Fattening Economic Survey in 1911

Rank (Fattening period)	Cost			Income			Profit per head	Number of heads raised in a year
	Price before fattening	Feed cost	Shed cost	Price after fattening	Estimate of manure	Wages of cultivation		
Upper (100 days)	85	30	8	115	20	6.66	18.66	3
Middle (150 days)	70	30	10	95	25	10	20	2
Lower (1 year)	60	45	15	75	35	10	5	1

Source: Home Affairs Department, Shiga Prefecture 滋賀県内務部, *Cattle in Shiga Prefecture* 滋賀県之畜牛 (Ohtsu: Home Affairs Department, Shiga Prefecture, 1911), 80-81.

Table 2 shows the income and expenditure for each fattening category. In addition to the sale price, the fact that the estimated price of stable manure and cultivation royalties are counted as income reveals their importance as dung and draft cattle. The profit obtained from fattening one cow or bull is in the order of middle rank, upper rank, and lower rank. However, since three heads per year are kept for upper rank and two heads per year for middle rank, the order of annual profit is upper rank, middle rank, and lower rank.

It should be noted, however, that the amounts listed in these tables are not actual cash exchanges. The item “Estimated Price of Stable Fertilizer” in Table 2. is a clear indication of this, but the same is true for the other items. First, the sale/purchase price ought to be considered. When cattle were purchased or sold, it was common for the cattle dealer to visit the cattle farmer and exchange the cattle that have been

fattened for the next batch of cattle to be fattened. In that case, the farmer was paid the difference between the price of the stock cattle and that of the breeding cattle. For feed and rearing costs, cash receipts and disbursements were quite different depending on whether they are purchased or self-supplied. In Gamo County, in particular, double cropping was common and barley, which was used as a concentrated fodder, was produced in abundance. Even regarding the cost of straw, it was probably likely to be also largely self-supplied rather than purchased.

The estimated price of stable manure and cultivation fees are both self-supplied, and in some cases, the profit may have been negative when considering the actual cash balance. Therefore, it would have been a tremendous change for the management of cattle farms for cattle to have afforded cash to the farmer at the time of exchange. Indeed, before the introduction of fattening, farmers had to pay for the purchase, feed costs, and bedding straw costs, as well as additional payments to livestock dealers when cattle were exchanged. When a large number of animals are fed, feed and other expenditures increase two or three-fold, while the amount of stable manure and cultivation needed by the farmer is limited and cannot be depleted. Moreover, the purchase of feed and bedding straw would increase. Therefore, the indigenous farmers' method of combining traditional cattle fattening method in tandem with that same cattle used for arable agriculture remained. It should be noted that multiple cattle rearing did not mean that it was more advantageous than single animal feeding in terms of income and expenditures. This is the reason why beef-only cattle management was not efficient from the viewpoint of the cattle rearing farm management.

Why is the fattening period for upper rank, which is sold at the highest price point, the shortest, and the fattening period for lower ranked ones, which is sold at the lowest price point, the longest? It was not always believed that the pre-fattening fleshiness was directly indicative of the cattle's ability to be fattened. In reading historical documents by a livestock engineer in Shiga Prefecture from the period, there was no mention of the relationship between genetic qualities and fattening. While cattle with high quality meat require feed to sustain life and require feed for thicker fattening, lean cattle require feed to sustain life, boost muscle, and for meat fattening.¹¹ Since the amount of feed that a cow or bull can eat is limited, for lean beef, it takes a long while because the process involves two steps: first, the muscle is fully developed, and then fat is added.

“If it takes one hundred days to bring a normal cow to a nutritional state of 120 percent, it will take two hundred days to bring a zero percent cow to ten or twenty percent, which means that the number of days of management is doubled. This means that not only is there a loss of feed. This means that not only is there a loss

¹¹ Miyazaki Takanobu, “How should the management of beef cattle be done? 役肉牛の経営は如何に為すへきか,” *Bulletin of Shiga Prefecture Agricultural Association* 滋賀県農会報 64 (1916), 4.

of feed at long rearing period, but there are other significant losses as well as forced to start fattening under disadvantaged conditions.”¹²

Considering the cost of fattening and the optimum farming season, the likely choice was to fatten the cattle for one year and sell them off when some increase in meat volume was achieved, rather than fattening them for a longer period than one year and adding sufficient fat.

If the drafting and fattening were linked by dividing the cattle according to the type of meat before the beginning of fattening, it would have been necessary to change even the feeding conditions by the farmers, and therefore, “It is extremely important to raise cattle during the working period.” This does not mean, however, that it was desirable to avoid hard work and provide nutritious feed. The muscles should have been fully developed and built during the first five to ten years of working before the animals were fattened. Cattle younger than five years were sometimes considered unsuitable for fattening because they also required more nutrients for growth.¹³

As mentioned above, the fact that single cattle rearing by rice farmers continued without the establishment of a dedicated beef cattle business has often been regarded as “a delay in Japanese livestock production.” However, cattle fattening combined with rice cultivation was economically rational by securing self-supplied feed and enabling meticulous feeding management as well as because the working period was positioned as the preparatory stage for fattening, which seems to be rational.

Expansion of Beef Demand after the Russo-Japanese War and Introduction of Korean Cattle

The second landmark period was the Russo-Japanese War. The increase in military meat demand revealed the limits of the domestic beef supply system based on draft cattle. Soon the Korean peninsula became a sought-after source of meat supply. This fact indicates that the expansion of beef eating in Japan was inextricably linked to imperialism and colonialism.¹⁴ In Japan, however, cattle were fattened in the Shiga Prefecture to produce fatty, tender meat, and there has been a qualitative diversification of beef since, as discussed in the previous section. In this section, we

¹² Ibid., 5.

¹³ Ibid., 2.

¹⁴ According to Miyasaka Goro, *Economic Geography of Animal Industry* 畜産経済地理 (Tokyo: Sobunkaku, 1936), 47, the Navy adopted beef as a “nutritional food” in 1869. It was earlier than the lifting of the aforementioned “meat-eating ban” by the Emperor.

will discuss the importation of Korean cattle¹⁵ after the second transitional period in Japan, not only in terms of dietary habits but also in terms of the agricultural status or imperialism, to present the range of considerations in the study of dietary history.

The following quote is a representative description of the expansion of beef eating during this period.

“Beef consumption began to grow rapidly from the end of the Meiji period to the beginning of the Taisho period due to population growth and the spread of meat-eating habits... In 1915, when World War I brought a booming economy, beef production increased to 43,200 tons, and domestic production in Japan was no longer sufficient to meet demand. The beef was therefore imported not only from Korea but also from Qingdao.”¹⁶

However, it is insufficient to look at this fact only from a quantitative perspective. What changes in the beef supply system supported this expansion of meat-eating? Moreover, in what political, cultural, and economic context did this become feasible?

Until the 1960s, when the use of farm tractors became widespread, cattle did not exist exclusively for meat but were raised as dual-purpose animals that were used for their meat after five to ten years of their working life. Therefore, an increase in the number of cattle slaughtered for meat would directly translate into a decrease in the number of cattle used for labor. In fact, the average annual number of cattle slaughtered in the five years before the outbreak of the Russo-Japanese War (1899–1903) was approximately 200,000 head, but by 1904 it had jumped to over 280,000 head, which caused the number of cattle raised to drop from 1.25 million in 1903 to 1.17 million in 1904.

“In the days of the war, it took a large number of cattle to be slaughtered for canning to supply the troops... Even if it were true that using as many cows as possible would be sufficient to supply the army, it would be clear beyond all recognition that this would cause a serious problem in the cultivation of the land... Since the outbreak of the Russo-Japanese War, sales of cattle for food have become more and more frequent in Okayama areas, and because of this,

¹⁵ “Korean cattle” does not refer to fixed breeds. In this paper, the term “Korean cattle” is used to refer to the native cattle that inhabited the Korean peninsula at that time. It is a group of cattle with large regional and individual differences. According to Koeduka Shota, *Korean Cattle* 朝鮮之産牛 (Tokyo: Yurindo, 1911), 19-20, “Although the history of the Korean cattle is still unclear, they belong to a natural breed that has not yet been artificially improved, and although their physique may vary from region to region, their skeletal structure and performance are very similar and almost identical.” Generally, cattle in the northern and western regions are larger in size, while those in the south are smaller. Northern male 4.23-4.45, female 3.78-4.1 feet. The figures were given as 4.12 feet for the southern male and less than 4 feet for the southern female.

¹⁶ The Secretariat of the Editorial Committee of “History of Beef” 「牛肉の歴史」編集委員会事務局 ed., *History of Beef* 牛肉の歴史 (Tokyo: Chikusan Shinkoh Jigyodan, 1978), 36.

prices have skyrocketed from 610 yen per cow to 910 yen or even 100 yen per cow, making it extremely difficult for farmers to raise cattle for farming.”¹⁷

This mass slaughter of cattle associated with the war affected agriculture, becoming a crisis. The main cause of the price hike was direct military demand of food for the troops¹⁸, but there were also indirect effects of the war, such as increased demand for draft cattle due to the requisitioning of horses in the horse drafting regions, the internment of Russian prisoners of war, and speculative purchasing by merchants.¹⁹

Moreover, this mass slaughter of cattle was not only during wartimes. Population growth and the growth of the economy were expected to result in a chronic shortage. It became clear that the beef supply system, which relied on domestic draft cattle, could not meet the demand. What emerged was the importation of cattle and raw beef from the Korean peninsula and Australia. Frozen meat imports from Australia were attempted using the new technology of freezing, but it was not sufficient to cover the beef supply shortage due to technical difficulties and differences in consumer tastes. Importation of live cattle from the Korean peninsula came to play a part in the beef supply, despite the dilemma of inadvertently introducing cattle plagues (discussed in detail in the following section) (Figure 2).

¹⁷ Furukawa Motonao (a veterinarian), “The Preparedness of Cattlemen: A Speech by Engineer Furukawa at the Kyoto Prefecture Temporary County Farmers’ Association Chairman’s Meeting 畜牛家の覚悟：京都府臨時郡農会会長会に於る古川技師講話,” *Japan Cattle Journal* 日本畜牛雑誌 3 (1905), 19.

¹⁸ “Soaring Cattle Prices and Supply and Demand 牛の騰貴と需給,” *Japan Cattle Journal* 7 (1905), 35.

¹⁹ “Signs of a Gradual Decline in Cattle 食牛漸次減退の兆,” *Japan Cattle Journal* 日本畜牛雑誌 7 (1905), 38; unsigned, “Replenishment of Labor 労力の補充,” *Japan Cattle Journal* 9 (1905), 12. According to Tadamasa Fukiura, *POWs of the Russo-Japanese War* 捕虜たちの日露戦争 (Tokyo: Nippon Housou Syuppan Kyokai, 2005, 164), the number of Russian POWs interned in Japan exceeded 70,000.

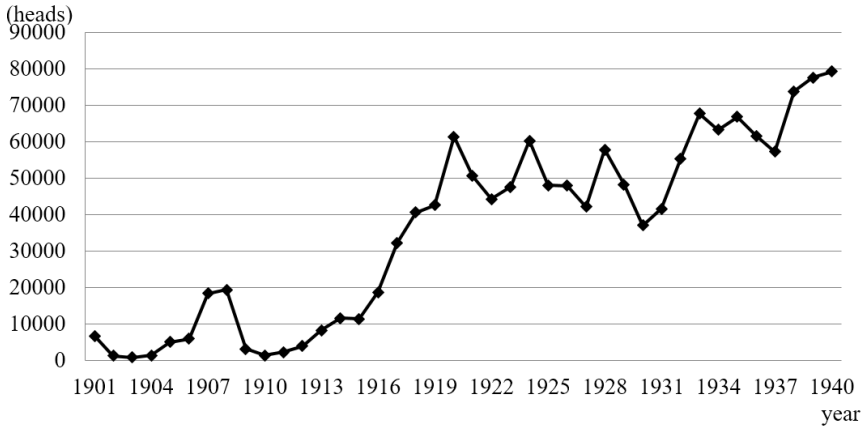


Figure 2. Import Amounts of Korean Cattle in 1901-1940

Source: 1901-1904 based on Reproduction Bureau, Office of the Governor-General of Korea 朝鮮總督府殖産局, *Livestock Industry of Korea* 朝鮮の畜産 (1927), from 1905 based on *Annual reports of Office of the Governor-General of Korea* 朝鮮總督府年報 (1906-1941).

(1) Cattle Imports and Exports and Cattle Quarantine-related Issues

An important characteristic of Korean cattle imports is that they took the form of live cattle transfers. The movement of living cattle included complications from a quarantine standpoint. In 1892, before the importation of Korean beef began in earnest, an epidemic of cattle plague that had spread from the Korean peninsula had already invaded Japan. The Korean peninsula was considered an “endemic area of cattle plague”²⁰ and Japan suffered seven invasions of cattle plague from 1892 until 1903, before the outbreak of the Russo-Japanese War.

In Korea, a cattle plague epidemic had already been observed in July 1891 and reported by the consuls in Wonsan and Incheon. Based on these reports, the Ministry of Agriculture and Commerce in Japan urged caution that the cattle hides imported

²⁰ Yamawaki Keikichi, *History of Domestic Animal Quarantine in Japan* 日本家畜防疫史 (Tokyo: Bun-eido Shoten, 1939), 49. Unless otherwise noted, matters concerning epidemic prevention shall be in accordance with the same document. However, it was also pointed out that “cattle plague in Korea is not always an endemic disease... and the area where cattle plague frequently occurs in Korea is Hamgyeongbuk-do, which closely borders with the so-called Seohakuria and Manchuria.” (Koeduka, op.cit., 45).

from Incheon,²¹ which amounted to more than one million pounds per year, should be carefully monitored for cattle plague infestation.²² Not much attention had been paid to live cattle, as fewer than 1,000 head were imported. In 1939, Yamawaki Keikichi, who served as the director of the Epizootic Research Center, criticized the fact saying, “From today’s perspective, it is rather humorous and somewhat worthless” for the plagues to have gone unnoticed, and stated the following: “But at that time, Korea was one independent country and was under the power of China. Cooperation and transparency on mutual protection against epidemics could not be rightly sought, and in the end, it was inevitable that one could not get involved beyond the methods of notifying Japanese merchants...”²³

This outbreak of cattle plagues led to the enactment of the Animal Quarantine Prevention Law in 1896 in Japan. In 1899, the Cattle Quarantine Ordinance was issued. A system was put in place to quarantine animals imported from cattle plague-endemic areas.²⁴

After the outbreak of the Russo-Japanese War, the May 1904 revision of the Cattle Quarantine Regulations added the cities of Yokohama, Shimonoseki, and Izuhara to the quarantine ports, which previously were limited to two ports, Kobe and Nagasaki. The Sanyo Railway had already opened to Shimonoseki in 1901, establishing Shimonoseki as a hub for domestic trade and distribution of Korean cattle and as a nexus between the sea route from Busan and the Honshu Railway.²⁵

Although the quarantine system at the ports of entry and export was established as described above, cattle plague broke out again via Korea in 1908. In response, it was decided to disperse the existing twenty-day quarantine schedule in Japan to nine days each for outbound and inbound ports, and two days for voyages. This was established in 1909, when the law was enacted in the Export Cattle Quarantine Act, and a quarantine station was established in Busan. The double quarantine system was abolished in 1915 by the Korean Export Cattle Quarantine Ordinance after the

²¹ Hyogo Prefectural Naimubu, *Hyogo Prefectural Prevention of Cattle Diseases* 兵庫県牛疫予防始末 (1893), 10.

²² For five years from 1888 to 1892, the lowest was 1,136,272 pounds in 1891. The highest was 1,776,629 pounds in 1892. Ohkura-sho Kanzei-kyoku, *Dainippon Chronological Table of Foreign Trade* 大日本外国貿易年表. On adult cattle imports are also in “Dainippon Chronological Table of Foreign Trade”: 80 cows in 1891 to 947 cows in 1889.

²³ Yamawaki, op.cit., 42.

²⁴ The changes in the quarantine regime were deeply intertwined with the veterinary and bacteriological history of the development and commercialization of vaccines. These genres have an important place in the growing activity of global history, and detailed studies have been published. See, Amanda Kay McVety, *The Rinderpest Campaigns: A Virus, Its Vaccines, and Global Development in the Twentieth Century* (Cambridge: Cambridge University Press, 2018); Karen Brown and Daniel Gilfoyle eds., *Healing the Herds: Disease, Livestock Economies, and the Globalization of Veterinary Medicine* (Ohio: Ohio University Press, 2010).

²⁵ Nakazato Tsuguo, “Development of Korean Cattle Import (Transfer) and Trade in the Meiji and Taisho Periods,” *Bulletin of Historical Geography* 歴史地理学紀要 32 (1990), 148.

annexation of Korea. After the eighteen to twenty days of quarantine regulations were implemented in Busan, the quarantine period was adjusted to only a visual inspection in Japan, and the 1920 amendment shortened the minimum quarantine period in Busan to twelve to twenty days, ensuring a simpler process. This quarantine system facilitated the introduction of Korean cattle into the country. The number of cattle imported from Korea, which was approximately 10,000 in 1915, increased dramatically, reaching 60,000 in 1920. In 1925, in addition to Busan, quarantine stations were established in Incheon, Wonsan, Jinnampo, and Seongjin to provide a better environment for the transfer of goods.²⁶

The imperialist nature of colonial rule cannot be forgotten as the background that made possible the speedy reform of the quarantine system, which was convenient for Japan. Chun Myung-Sun uses the term “test site” to conveniently describe Korea, where the quarantine regimes were frequently changed in the unique power relations of the colonial period.²⁷

(2) Korean Cattle as Draft cattle

The reason why Korean cattle were introduced as live cattle rather than slaughtered ones was because of their high utility value as draft cattle. The following are the characteristics of Korean cattle.

“1. Nature: Extremely quiet, easy to control; 2. Good performance, obedient to commands, and proficient in work; 3. A good physique and sound constitution with little disease; 4. Affected by cold, intense heat and rain; 5. Able to endure a poor diet and circumstances designed to save time and effort in feeding and management; 6. Low production costs and are available at extremely low cattle prices; 7. Physical strength, and especially have strong hoof walls to endure strenuous work; 8. Are highly fertile and economical to feed; 9. Good fertility; 10. Endurance concerning loads and draught and can walk relatively fast; 11. Suitable as a foundation for improving dairy breeds; and 12. The calves are most suitable for poultry seedlings.”²⁸

Points one through seven and point ten can be considered appropriate for these cattle being used as draft cattle. They are easy to domesticate (1, 2), strong and durable (3, 4, 7, 10), and highly economical (5, 6). Korean cattle, as draft cattle, were welcomed by farmers in Japan. The imported Korean cattle were not immediately slaughtered for meat but rather used as draft cattle by local farmers. In 1924, the number of

²⁶ Yamawaki op.cit.

²⁷ Chun Myung-Sun, “Veterinary Medicine of Empire and Livestock Animals of Colony: Epizootic Control during the Japanese Colonial Period 제국의 수의학과 식민지의 가축: 일제 강점기 가축 전염병 관리,” *The Korean Journal for the History of Science* 44:1 (2022), 171-192.

²⁸ Koeduka, op.cit., 26.

Korean cattle raised in Japan exceeded 210,000.²⁹ The total number of cattle raised was about 1,420,000 head, or 1,130,000 head excluding dairy cows,³⁰ which signifies that 17.7% of all cattle raised in the country, or about one in six head, were Korean cows.

Figure 3 and Figure 4 reveal the number of cattle by type and prefecture. The data shows that there is considerable variation among prefectures. In terms of the absolute number of Korean cattle, most cattle are kept in the traditional cattle-utilization areas of Yamaguchi, Hyogo, Kagawa, Osaka, and Kochi. However, the ratio was higher in Eastern Japan, where there had been a tradition of horse-raising, than in western Japan. For example, in Tochigi Prefecture, out of a total of 2,172 head, 1,332 head were used for dairy purposes (more than 60%), and of the remaining 840 head, 812 head were Korean cattle.³¹ This means that in Tochigi, Korean cattle accounted for 96.7% of cattle excluding those used for dairy production.

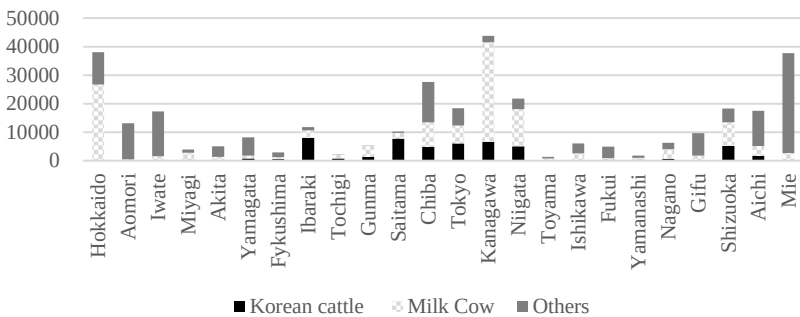


Figure 3. Number of Cattle in Eastern Japan Prefectures in 1925

Source: Livestock Industry Bureau, Ministry of Agriculture and Forestry, op. cit. 63-65.

²⁹ Livestock Industry Bureau, Ministry of Agriculture and Forestry 農林省畜産局, *Korean Cattle in Japan* 本邦内地に於ける朝鮮牛 (Tokyo: Nohrin-sho Chikusan-kyoku, 1927), 12.

³⁰ Agricultural Policy Research Commission ed., *Revised Basic Statistics on Japanese Agriculture* (Tokyo: Nohrin Toukei Kyokai, 1977), 258.

³¹ Nohrin-sho Chikusan-kyoku, op.cit., 63-66.

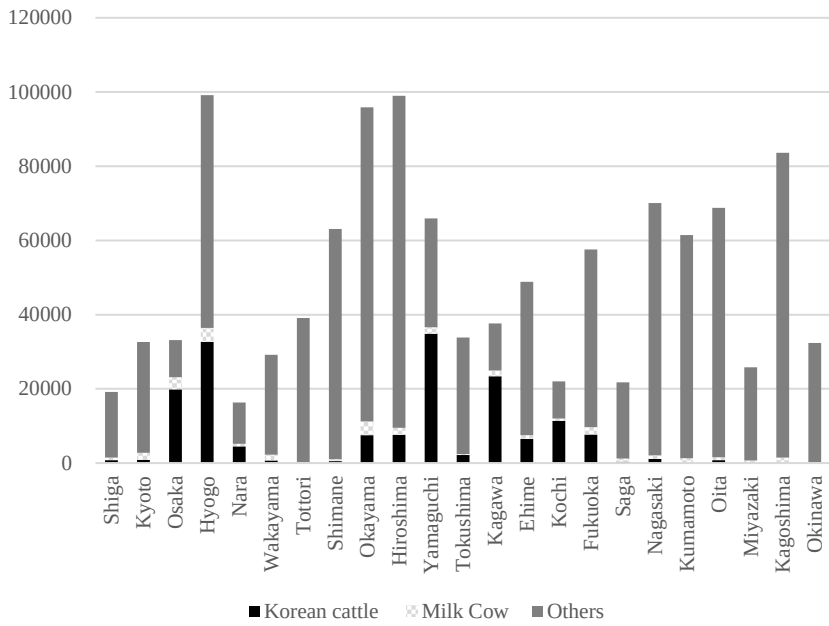


Figure 4. Number of Cattle in Western Japan Prefectures in 1925
Source: Livestock Industry Bureau, Ministry of Agriculture and Forestry, op. cit. 65-66.

Originally, these eastern prefectures were horse farming regions; however, the prices of horses skyrocketed due to the impact of World War I, creating a situation where “farmers below the middle-class sector could not easily afford to purchase horses”.³² Therefore, Korean cattle were introduced as an alternative. The pioneering introduction of Korean cattle in Tochigi Prefecture began in 1907, after the Russo-Japanese War, when the Prefectural Agricultural Association began subsidizing the joint purchase of cattle. After the start of World War I, private companies began to introduce Korean cattle around 1916–17. Thus, the number of Korean cattle in Tochigi rose rapidly, and as mentioned earlier, most of the cattle, excluding dairy cattle, were from Korea.

Since western Japan had a large number of draft cattle and each region had its preference for cattle, distribution routes were well established from cattle-producing regions in the Chugoku Mountains. In addition, advanced fattening was developed

³² “Actual situation of the purchase and use of Korean cattle 朝鮮牛購入及使役の実況,” *Japan Cattle Journal* 197 (1921), 33.

in Shiga and Hyogo prefectures. Korean beef tends to be lean and not suitable for producing high-quality meat. This reason may explain the relatively low percentage of consumption of Korean beef in western Japan.

When the importation of Korean cattle first began in earnest, their value as a source of meat was evaluated to be lower than that of native cattle, as can be seen in the following statement: “The result of excessive slaughter and the dramatic decline in fertility significantly reduce the value of Korean cattle as a source of meat after the cows were used as draft cattle, and we can hardly expect anything like the flavor of a prime beef.”³³ By the 1920s, however, the reputation of Korean cattle for meat use increased.

“[The meat of] Korean cattle are considered to [taste good] when they are used for the meat after being raised appropriately. Behold, when the Korean cattle were brought into Japan, they were lean and bony, but after a few months of being raised by farmers, their nutritional condition recovered, and gradually gained fat. Slaughtering at this point, we could yield high-quality meat.”³⁴

In this citation, it is noteworthy that the fleshiness of the meat improved while the cattle were used as draft cattle in Japan.

It is unhelpful to view, through a modern lens, prewar cattle fattening as inefficient, with fattening and utilization interfering with each other: “The use of cattle in the fattening process occupied a fairly major position, and fattening technology was also low grade, and the focus was on short-term cultivation where the cattle did not leave the so-called rearing area.”³⁵ The introduction of live cattle allowed regions and farmers who had not previously raised cattle to begin cattle farming with Korean cattle. In addition, the working period was meant to be a preliminary step in the fattening process that would increase the value of the cattle as beef cattle after they were brought out of service. The introduction of Korean cattle was a rational option for the use of cattle at that time, as they were used for both meat and drafting.

(3) Cattle Improvement and Multiplication Policy

In Korea, a series of circulars and other documents concerning the improvement and multiplication of cattle was issued in 1912.³⁶ The need for cattle improvement and

³³ “Fragment of Dr. Tokishige on the Korean Cattle Industry 韓国畜牛業に関する時重博士の断片,” *Japan Cattle Journal* 11 (1905), 7.

³⁴ “Korean Cattle Commentary 朝鮮牛解説,” *Japan Cattle Journal* 193 (1920), 31.

³⁵ National Beef Cattle Association, op. cit., 256.

³⁶ In February, instructions to the Director General of the Department of Internal Affairs 内務部長に対する指示: “On the Improvement and Propagation of Cattle 畜牛改良蕃殖に関する件”; in March, general instruction 総訓 No.9: “On the Improvement and Propagation of Cattle 畜牛の改良増殖に関する件”; in April, instructions to the director general of each province 各道長官に対する指示: “On

multiplication was explained from two perspectives: cattle were indispensable for agricultural management and were key export products. In Japan, Western breeds were introduced to increase the size of cattle in order to improve the breed, whereas in Korea, indigenous cattle were used to improve the breed. In selecting breeding bulls in Korea the finest ones were those “produced in the northern part of the country”³⁷ and “Korean bulls were those with sound physique, good disposition, and well-developed hindquarters.”³⁸ Northern cattle were generally larger than their southern counterparts. The condition of a “good nature” is of great importance in the use of cattle as draft cattle.

The number of cattle raised in Korea, which was about 700,000 in 1910, steadily increased to 1.35 million in 1915 and to 1.49 million in 1920, despite a large number of cattle being exported to Japan.³⁹ In terms of numbers, the cattle improvement and propagation policy was a success.⁴⁰

In 1921, the head of the Central Livestock Market, the president of the Korean Cattle Transfer Company, and others submitted a petition to the Speaker of the House of Representatives regarding the improvement of Korean cattle. In the petition, it was mentioned that there was an imbalance between the supply and demand of cattle in Japan and that there was a notable shortage of cattle, and that Korean cattle were highly fertile and had value for meat after being reared as draft cattle. However, since the qualities of Korean cattle were miscellaneous, it was argued that it was necessary to castrate all but the best cattle to improve and stabilize the overall quality of the cattle. The beef supply situation in Japan that relied on imports and transfers was also a concern, given the situation in which the German-Japanese war within World War I led to the acquisition by Japan of the Jiaozhou Bay Leased Land and the import of fresh cattle and beef from Shandong Province in China.

The improvement, breeding, and fattening of Korean cattle were recognized as essential for meat self-sufficiency in the Japanese empire, indicating that food self-sufficiency was considered within the Japanese imperial sphere, which included Korea.

the Improvement and Propagation of Cattle 畜牛の改良増殖に関する件”；in December, instructions to the provincial agricultural technology officers 道農業技術官に対する訓示: “On the Improvement and Propagation of Cattle 畜牛改良増殖に関する件”；and instructions to the provincial agricultural technology officers 道農業技術官に対する指示: “On Animal Husbandry 畜産に関する件.”

³⁷ “On the Improvement and Propagation of Cattle.”

³⁸ “On Animal Husbandry.”

³⁹ *Yearbook of the Korean Governor-General's Office* 朝鮮総督府統計年報.

⁴⁰ According to Niino Yutaka, “A Quantitative Examination of the ‘Cattle Improvement and Propagation Policy’ in Colonial Korea 植民地朝鮮における「畜牛改良増殖政策」の数量的検討,” *The studies of Asia and Africa* 東洋研究 135 (2000), 59, the policy objective of expanding the agricultural production base was not successful because the area of cultivated land per head of cattle and the number of cattle per 100 farm households remained almost flat during the colonial period, despite the increase in the number of cattle. This was evaluated as not successful.

By annexing Korea as a colony, it was possible to improve quarantine issues and to succeed in improving and breeding cattle to ensure the transfer of live cattle to Japan, thereby achieving the goal of beef self-sufficiency.

(4) Military Beef

The modern era of Japan was a tense period of successive wars, so much so that it has been called “a society where the postwar period was pre-war.”⁴¹ Modern nutrition required large quantities of beef in a soldier's diet, and Korean beef was an important source of it.

“The annual beef consumption of the Central Office of Artillery Arsenal (Army Main Rations Depot) was about 300,000 pounds of carcass meat, most of which was imported Korean beef, which of course is cheaper than beef from Japan... Canned fish is at a disadvantage because its freshness is easily changed in a short period, while beef, on the other hand, is more suitable for taste because its meat is tender after being canned for a considerable period.”⁴²

Not only was Korean beef inexpensive, but the meat's quality was also suitable for canning. When canned, the fat content dissolves and diminishes after cooking.⁴³ Bulls were sought rather than cows, old cattle rather than young cattle, and Korean cattle rather than native cattle. The evaluation of Korean cattle as beef, which was mentioned in section (2) Korean Cattle as Draft Cattle, was based on civilian demand. In terms of consumer demand, fatty, tender meat was preferred, which was based on the consumption pattern of hot pot dishes such as beef casseroles and sukiyaki, which were the highest standards of evaluation. Even the same beef had different quality requirements depending on how it was consumed.

A comparison of meat consumption between soldiers and civilians after the Russo-Japanese War showed that soldiers consumed about eighteen times more meat than civilians, and it was also noted that there was a spillover effect of Western foods such as rice curry and cutlets to the local regions.⁴⁴

⁴¹ Harada Keiichi, *Nisshin/Russo-Japanese War* 日清・日露戦争 (Tokyo: Iwanami Shoten, 2007), 235.

⁴² “Prospect of Livestock Production 畜産一瀾,” *Japan Cattle Journal* 266 (1926), 148-149.

⁴³ “Beef Price Going Down,” *Japanese Cattle Journal* 6 (1905), 33.

⁴⁴ Ishikawa Hiroko and Ehara Ayako eds., *Modern and Contemporary Food Culture* 近現代の食文化 (Kawasaki: Kogaku Shuppan, 2002), 64-65.

Conclusion

As we have seen in the sections above, the process of increasing beef consumption in modern times has developed in tandem with a variety of issues, including politics, economics, lifestyle and culture, agriculture, transportation technology, and veterinary medicine.

Before the Restoration, meat-eating had been formally prohibited. In practice, some people had opportunities to eat game as *kusurigui*: eating meat for medicinal purposes. Although, livestock had been severely tabooed up until that period, In the Civilization and Enlightenment period, beef eating spread rapidly. It was mainly eaten in an indigenous cooking method called a beef “hot pot.”

This cooking method influenced the development of beef fattening. In the pre-war period, farmers kept only a single cow for the purpose of plowing, transporting, and collecting fertilizer, but the process of fattening was implemented to satisfy people's appetites. The goal of fattening had consistently been fatty meat. With the development of fattening technology, the ideal meat in the 1920s was fatty meat with intramuscular marbling. This beef-eating culture is inextricably linked with the fact that beef was first accepted as a hot pot dish in the modern era.

Cattle fattening in Shiga Prefecture took place within the scope of the indigenous cattle breeding system. The fact that multiple cattle rearing based on the Western model did not take root is not seen as a delay in the modernization of the Japanese cattle industry but rather as technical and managerial rationale for combining it with arable agriculture.

At the same time as the development of fattening technology in Japan, the introduction of live cattle from colonial Korea began in earnest. This was rational from the standpoint of the cattle-rearing system of Japan, which was used for both service and meat, and from the perspective of food self-sufficiency within the imperial sphere. The introduction of Korean cattle brought about a qualitative diversity as well as a quantitative expansion in terms of the supply of cheaper and leaner beef, and contributed to the change in consumption that has been termed the “popularization of meat eating.”

The cattle industry in modern Japan did not weaken with the indigenous form of single cattle rearing, however, the process of fattening was added to the process that was for the sole purpose of drafting, and cattle were transformed from a means of production for arable crops into a new source of income. This change was only possible because of the number of cattle introduced from Korea.

Abstract

The intention of this paper is to describe how the cattle industry in Japan had changed with the introduction of beef eating habits.

Before the Japanese Meiji Restoration, meat-eating had been formally prohibited. In practice, some people had opportunities to eat game, although livestock had been severely tabooed. In the Civilization and Enlightenment period of Japan, beef eating spread rapidly. It was mainly eaten in an indigenous cooking method called a beef “hot pot.” This cooking method influenced the development of beef fattening. In the pre-war period, farmers kept only a single cow for plowing, transporting, and collecting fertilizer, but the process of fattening was added later introduced to satisfy people's appetites for better-tasting beef. The goal of fattening had consistently been fatty meat. With the development of fattening technology, the ideal meat in the 1920s was fatty meat with intramuscular marbling. This beef-eating culture is inextricably linked with the fact that beef was first accepted as a hot pot dish in the modern era.

Cattle fattening in developed areas took place within the conventional system of cattle rearing, which involved single cattle rearing system combined with arable agriculture. The fact that multiple cattle rearing based on the Western model did not take root is not seen as a delay in the modernization of Japanese livestock breeding, but rather as a technical and managerial rationale for combining single-head rearing practices with the utilization of that cattle for arable agriculture.

Even though the indigenous cattle rearing system remained, the introduction of live cattle from colonial Korea brought complexities to the Japanese cattle industry. The importation of Korean cattle brought about a qualitative diversity as well as a quantitative expansion in terms of the supply of cheaper and leaner beef, and contributed to the change in consumption that has been termed the “popularization of meat eating.”

Keywords: fattening, Korean cattle, drafting cattle, cattle plague, colonial period