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Transfer of Sake Technology to Korea, Taiwan and China

メタデータ	言語: eng 出版者: 公開日: 2009-04-28 キーワード (Ja): キーワード (En): 作成者: 吉田, 元 メールアドレス: 所属:
URL	https://doi.org/10.15021/00002728

Transfer of *Saké* Technology to Korea, Taiwan and China

Hajime YOSHIDA
Shuchiin University

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1. INTRODUCTION

Alcoholic beverage production at the beginning of the Meiji Era was Japan's largest industry, even larger than the textile industry in terms of production volume. Although not yet mechanized, the large *saké* breweries of Nada and Itami in Kansai (the Kyoto-Osaka-Kobe area) used 1,000 *koku* (1 *koku* = 180 liters) of rice annually, at a time when the consumption of rice nationally was 3.5 million *koku*. With the advent of mass production, transport to distant destinations, and mass consumption, Japanese *saké* in this period already had aspects not seen in the alcoholic beverage of other Asian nations.

Although the Dutch East India Company began exporting a small amount of Japanese *saké* to Tonkin and Java from the mid-17th century, the product was fundamentally for domestic consumption and it was not until the Meiji Era that local production in countries of East Asia began.

In the latter part of the 19th century, alcoholic beverage production in the countries of Asia had not attained the stage of mass production and in many cases was a side business of drinking establishments. When the Japanese began to emigrate abroad, they rarely developed a taste for the local alcoholic beverages and so they either imported *saké* or began local production.

This paper will deal with production of *saké* in Taiwan and the Korean Peninsula, territories of Japan from the Meiji Era to the end of the Second World War, and in Manchuria (current North-Eastern Region of China), a quasi-colony of Japan. The paper will review how Japanese *saké* that had been quick to internalize Western technology was accepted in these regions, its impact on alcoholic beverage technology in China, and the role played by taxation of alcoholic beverages in the finances of the colonies.

2. PRODUCTION OF JAPANESE *SAKÉ* IN KOREA

The earliest example of overseas production of Japanese *saké* is probably Korea. In the Edo Period, there were as many as 4,500 Japanese from Tsushima living in the Japanese

Consulate in Pusan and all meals in the consulate were Japanese style. Since these people did not like Korean alcoholic beverages, they either purchased high quality *saké* that was produced in Settsu (Osaka and Hyogo Prefectures), or summoned *koji* (fermented rice) masters from Japan and began producing Japanese *saké* using Korean rice as raw material. It is said that there were several *saké* breweries within the consulate compounds.

With the execution of the Koka Treaty in 1876, the numbers of migrant Japanese laborers who came to Korea increased. These were primarily day laborers, craftsmen, and merchants. In Pusan, a certain Araki from Tsushima began producing unrefined *saké* in 1877 and a certain Okubo from Iki commenced the production of refined *saké* in 1879. The *saké* brewery established in western Pusan by Minesaburo Imanishi and Masubei Fukuda in 1884 was housed in a restored hovel in the former Japanese Consulate.

By 1900, Japanese living in settlements in Pusan, Seoul, and Inchon numbered more than 10,000 and the number of *saké* shops that catered to these people increased. However, the scale of these operations around 1903 and 1904 totaled only about 2,000 *koku* in Pusan, and the combined total for Kunsan, Mokpo, Inchon, and Seoul was only about 4,000 *koku*. The affluent drank, for the most part, quality *saké* from Izumi and Nada imported by merchants under government patronage.

Japanese *saké* was produced in a humble shanty using old equipment brought from Japan, and its main ingredients were Korean rice - contaminated with sand and unhulled rice - and turbid water. So, the quality of Japanese *saké*, certainly Korean unrefined alcoholic beverage (*makkoruri*) as well, left much to be desired. Among employees, although some had worked in *saké* breweries in Japan, there were even complete novices to the art. According to a survey conducted in 1909 by the Tokyo Tax Supervisory Office, Imanishi's brewery mentioned earlier maintained that if water used in the brewing process was flavored with Yoshino cedar shavings sprinkled with an alcohol and salicylic acid solution (a method called "Salicylic acid application"), the odor of brand new *saké* was eliminated and the *saké* could effectively be preserved over longer periods. This, however, was probably an attempt to counteract the lack of brewing expertise.

In 1904, Baron Tanetaro Mekata was appointed financial advisor to the Korean government with the recommendation of the Japanese government, and a nationwide survey of the Korean alcoholic beverage production business was conducted by Japanese technicians. The purpose of this survey was to prepare for the creation of a tax on alcoholic beverages. In those days, unrefined alcohol beverage (*makkoruri*) was primarily produced in southern Korea and distilled alcohol (*soju*) was produced in northern Korea, but with production by drinking establishments as a side business and rampant home brewing, it was said that 70% of Korean households were producing alcoholic beverages. At the time, home brewed alcoholic beverages were still tax-free.

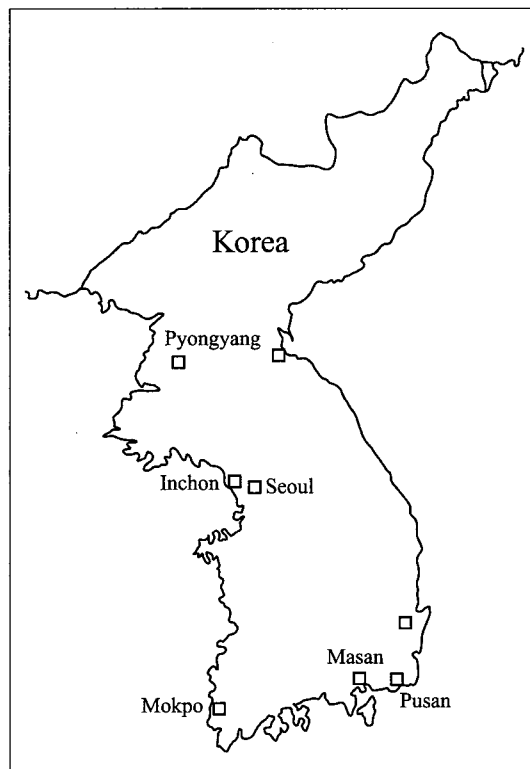
Based on this investigation, the Korean government initiated a tax on alcoholic beverages and tobacco in February, 1909. Production of alcoholic beverages became a licensed business with fines levied on offenders. In all, 1.3% of the total tax revenue was to come from the alcoholic beverage tax. First, alcoholic beverages were categorized into Type 1, Brewed Alcoholic Beverage (Japanese *saké*, unrefined alcoholic beverage, and herbal alcoholic beverage), Type 2, Distilled Alcohol (*soju*), and Type 3, Admixed (brewed alcoholic beverage

and distilled alcohol with admixture). Volumes of production reported by brewers or distillers were classified into several levels, and tax was levied according to the level. Although the tax rate was initially kept low, the intention of the Korean government and the Japanese government that acted behind the scenes was to develop the alcoholic beverage tax into a major source of revenue in the future. At the time, there were 125,487 businesses that belonged to Type 1, 30,314 to Type 2, and 4 to Type 3.

In October of the same year, in an attempt to raise the quality of alcoholic beverages and to produce wine, a Brewing Laboratory was established on the outskirts of Seoul with Genjiro Torii, a Japanese technician, playing a central role.

After the formal annexation of Korea by Japan and the establishment of the (Japanese) Government-General of Korea in the following year, production of alcoholic beverages in Korea continued to increase and in fiscal 1916 reached 486,315 *koku* of unrefined alcoholic beverage, 90,415 *koku* of *soju*, and 28,826 *koku* of herbal alcoholic beverage. There were 120,000 people involved in producing Korean alcoholic beverages and 370,000 people with licenses for home brewing.

Korean alcoholic beverages represented the overwhelming share of production. Korean-made Japanese *saké* amounted to 34,260 *koku*, and *saké* brought from Japan amounted to 26,799 *koku*. Those producing Japanese *saké* were almost all Japanese, the majority of whom had immigrated to Korea towards the end of the Meiji Era and the beginning of the Taisho Era. The



former occupations of these people were predominantly rice polishers and rice dealers. Among these people, there were those that bought out breweries that were already in operation and those that entered the market in Manchuria in later years.

The Government-General of Korea abolished the old alcoholic beverage tax law of the Korean government and, in July 1916, promulgated a new alcoholic beverage tax ordinance. Although this ordinance purportedly served to protect and nurture the alcoholic beverage production business, the real objective was to stabilize the finances of the colony by raising the alcoholic beverage tax. In addition to raising the tax rate per unit of production volume, the ordinance provided for strict investigation of the volume produced. Because of this, tax revenue from alcoholic beverages increased by 840 thousand yen against the previous year to 1.35 million yen.

Moreover, technical officers were stationed in 6 provinces including Gyeonggi Do (Province) to provide instruction on improving quality in alcoholic beverage production. The policy of the Government-General was to dissolve the numerous small-scale producers, improve production facilities through integration, and to place people with capital and (in the words of the Government-General) “who are educated,” in charge of managing the businesses so that alcoholic beverage taxes could be collected from these businesses. The term “educated” referred to Japanese immigrants and a specific group of wealthy Koreans. Examples of Japanese involved in the production of Korean alcoholic beverages are rare, and we can therefore safely assume that the Japanese were for the most part exclusively involved in producing Japanese *saké*.

The Government-General of Korea raised the alcoholic beverage tax successively in 1919, 1920, 1922, 1927, and 1934. Moreover, in order to restrict the production of illicit alcoholic beverages made by farmers, *nuruk* (fermented rice), corresponding to the *koji* used for Japanese *saké*, became subject to licensing. As a result, the alcoholic beverage tax revenue that accounted for 10% of total tax revenues in 1921 increased to 25% in 1925. The aim of the Government-General to enhance quality and increase alcoholic beverage tax revenue through restructuring manufacturers and integrating them into an industry can be said to have been successfully achieved. Perhaps as an expression of confidence gained through this success, when the Government-General of Taiwan implemented monopoly sales of alcoholic beverage in 1922, bureaucrats experienced in the administration of collecting the alcoholic beverage tax in Korea were dispatched to the Taiwan Government-General Monopoly Bureau to make preparations.

With the coming of the Showa Era, the task of combining and integrating producers of unrefined alcoholic beverage was almost complete, and influential rural Koreans began to play a central role in the management of companies. Producers of unrefined alcoholic beverages numbered 4,112 in 1934 or one-thirtieth the number in 1916. In the same year, citing a decrease in the number of people holding licenses for home brewing, the license system was abolished. The reason for the decrease was that as a result of successive tax hikes, home brewed alcoholic beverage became more expensive than alcoholic beverage on the market. From this point on, the authorities concentrated their efforts on policing illicit alcoholic beverage production by farmers. As a result, various traditional home brewed alcoholic beverages of Korea disappeared and four alcoholic beverages, unrefined alcohol beverage (*makkeolli*), distilled alcohol (*soju*), herbal alcoholic beverage, and Japanese *saké*, became the pillars of alcoholic beverage

consumption in Korea.

After 1920, *saké* entering Korea from Japan was taxed with an 8% import duty (this tax did not apply to alcoholic beverages entering Japan from Korea). Since imported *saké* was expensive, local production in Korea progressed and several large manufacturers from Nada entered the market. Two examples of such entries are Masudaya Shoten of Incheon, originally a sales agent for “Hakutsuru” but later recruiting Kano as a president; and Yamamura Shuzo, the producer of the Japanese *saké* “Sakuramasamune” that established the Showa Sakerui Co., Ltd. in Masan.

In 1927, Japanese *saké* produced in Korea exceeded 60,000 *koku* in volume. On the other hand, imports from Japan continued to decline and in 1931 the volume fell below the 10,000 *koku* mark. Although in small quantities, some *saké* was shipped from Korea to Guandong Province in Manchuria.

In terms of technology for producing alcoholic beverage, with the advent of the Showa Era technical officers were stationed in all provinces to intensify supervision. The Brewing Laboratory that had once been closed in an attempt at government restructuring was revived as the Brewing Laboratory attached to the Tax Section of the Government-General of Korea's Fiscal Bureau in 1929 in order to perform various tests and research. Moreover, as had been seen in Japan, government initiative policies were implemented e.g., establishing the Korea Alcoholic Beverage Producers Association for major producers and holding tastings and seminars to improve the quality of alcoholic beverages.

In 1935, when the production of alcoholic beverages reached 2 million *koku* and the alcoholic beverage tax accounted for 15 million yen, or more than the 12 million yen collected in land tax, within a total tax revenue of 53 million yen, a book titled *The History of Alcoholic Beverage Production in Korea* was published to commemorate the 25th anniversary of the Government-General of Korea. Numerous companies tendered congratulatory notes in this publication, most of which lauded the fact that the alcohol beverage production policies from the later Meiji years, helped with abundant raw materials, efforts by people concerned and cheap labor, had been highly successful. The alcoholic beverage tax was able to make a substantial contribution in the finances of the Government-General because of the earlier efforts toward restructuring and integration of producers and enhancement of quality.

The book contained an abundance of highly optimistic statements that showed blind confidence in the production of Japanese *saké* in Korea, e.g., “Since the Korean people like Japanese *saké*, as Korea's economic strength increases, there will be a natural assimilation with increased consumption of Japanese *saké*; while in adjoining Manchuria, a market for Japanese *saké* is gradually being formed. Future prospects are bright.” However, when read carefully, there are veiled criticisms from Japanese and Korean provincial governors: The current *saké* excessively emulates products in Japan and is losing the mellowness distinctive of Korean *saké*; Demand is exceeding supply, and as a result illicit manufacture is increasing; Since drinking alcoholic beverages is a form of entertainment for farmers, inexpensive products must be made available to this group.

Although production and sales of expensive Japanese *saké* and *shochu* (distilled alcohol) certainly helped stabilize colonial finances, the other side of the coin was that the farmers, stripped of the right to produce home brewed alcoholic beverages for their own enjoyment,

were forced to purchase alcoholic beverage on the market at high prices. Cases of illicit manufacture in excess of 10,000 *koku* per year were a thorn in the side for the Government-General and indicate the tenacity of the people's resistance to the prevailing policy.

3. PRODUCTION OF JAPANESE *SAKÉ* IN TAIWAN

The southernmost point where Japanese *saké* is produced in Japan is Kumamoto Prefecture. Further south, in Kagoshima Prefecture and Okinawa Prefecture, the distilled alcohol, *awamori*, is produced. The production in Taiwan of Japanese *saké*, which goes bad easily and is difficult to preserve in a subtropical zone like Taiwan, presented many problems that had to be overcome.

Through victory in the Sino-Japanese War, Taiwan became a Japanese territory for 50 years from 1895 to 1945. Taiwan's central location, being close to mainland China, Okinawa, and the Philippines, meant that its people were familiar with a variety of alcoholic beverage produced by the Han and indigenous peoples. The island is exceedingly interesting from the perspective of the interchange of alcoholic beverage producing technology. At the time Japan assumed possession of Taiwan, distilled alcohol of southern Chinese origin such as *mijiu*, *fangshujiu*, *ganzhejiu*, and *tangmijiu* were being produced in the southern part of the island with rice, sweet potato, sugarcane juice, and cane molasses as raw material. In other areas, *kaoliangjiu*, *awamori*, and *shaoxingjiu* were being produced using methods slightly different from the authentic version.

In the late 1890s to 1900s, in parallel with a concerted campaign of oppression of the Han and indigenous people conducted by the Taiwan Government General, an investigation of traditional customs and habits was conducted throughout the island by an Emergency Investigative Committee on Old Taiwan Customs. Although accurate statistical data on alcoholic beverage production in Taiwan during this period are not available, production of Japanese *saké* had already been introduced by Japanese immigrants to cities in central and southern Taiwan. Many of these were extremely small businesses also producing soy sauce and *miso* (bean paste), and the volume of *saké* produced was less than 100 *koku* per year. Without the classical seed mash, the method of production involved first allowing lactic acid fermentation and safely causing alcohol fermentation in the presence of lactic acid or adding pure cultured yeast. In the south, the majority of the *saké* produced was what is known as "reproduced Japanese *saké*" made by adding *saké*-cakes, *mirin*, glycerol or *mizuame* (starch syrup) to Taiwan-made *tangmijiu*, or by adding glycerol and glucose to alcohol.

Large manufacturers such as Hakushika, Hakutsuru, and Sakura Masamune appointed agents in Taiwan and sold *saké* transported from Japan, but in an age with insufficient refrigerating facilities, unless salicylic acid was used as a preservative and the *saké* bottled, the product putrefied in no time. Moreover, since *saké* was expensive in Taiwan, the market was not one of high potential for manufacturers.

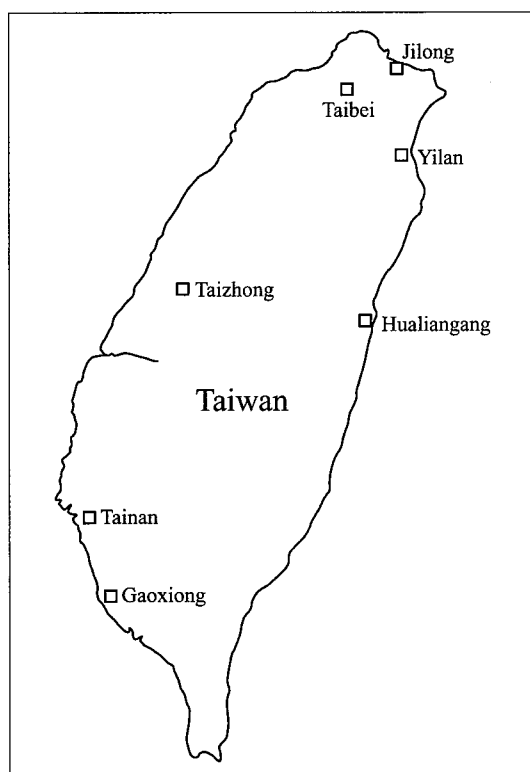
In 1904, Tetsuji Fujimoto, an assistant engineer for the Taiwan Government-General, conducted a full-scale survey of the alcoholic beverage industry of Taiwan. Fujimoto's evaluation of Taiwanese alcoholic beverage was extremely low. Citing unsanitary conditions in the place of production and the poor quality of the alcoholic beverage, he identified the

enhancement of quality as the most importance goal for the future. He further stated that due to differences in climate, natural features, and water quality between Japan and Taiwan, production of Japanese *saké* of the identical variety produced in Japan was not possible. He suggested that it would be more beneficial to raise the quality of such local alcoholic beverages as *hongjiu* for export to Japan, and noted that cane molasses, which is waste material, could be used rather than rice.

The Japanese living in Taiwan predominantly drank Japanese *saké*; in 1906, a total of 16,418 *koku* was consumed by a Japanese population of 71,040.

The full-scale production of Japanese *saké* in Taiwan probably was the result of the desire to drink inexpensive *saké* to which preservatives had not been added. The Nihon Houjousha established in Taipei City in 1913 was founded by Fujimoto, about whom mention has been made, and Yasushi Mori, an assistant engineer for the Tokyo Taxation Business Bureau. The factory of this company had double walls of brick with a full-scale refrigeration system that kept the temperature at 5 to 6 degrees centigrade. The rice used was Bizenmai from Okayama Prefecture and the factory was operable on a year round basis targeting production volume of 10,000 *koku* per year. The product finally produced was elegantly named “Butterfly Orchid,” but because the refrigeration system consumed vast amounts of electrical power, the company began to face financial difficulties after several years and soon closed its plant.

A monopoly system was introduced in 1922 for alcoholic beverages following similar



systems for opium, salt, and camphor. With the sugar consumption tax, land tax, and tax from the monopoly products such as opium, salt, camphor and tobacco, the Taiwan Government-General quickly achieved fiscal surplus and independence in the late 1900s. However, the world depression after the First World War caused tax revenue to fall sharply. As a result, the land tax was increased, an income tax initiated, and alcoholic beverage sales monopolized in an effort to increase revenue. In the process, a difference of opinion surfaced between the Regional Financial Bureau and the Monopoly Bureau of the Taiwan Government-General over whether to increase revenue by increasing the then existing tax on alcoholic beverages, or by creating a monopoly system. After considerable wavering, the view of the Monopoly Bureau prevailed and the decision to create a monopoly was taken. The Monopoly Bureau insisted on the need for effective use of the raw material rice through integration of production and quality enhancement in order to raise profitability.

On the occasion of the prohibition of private businesses producing alcoholic beverages, a grant was provided to the almost 200 producers active in Taiwan before the institution of the monopoly. Of these, 15 factories that were relatively well-equipped remained as core factories of the Monopoly Bureau. Some among those that went out of business remained as sellers, but the majority of these were Japanese, and as a result the Taiwanese manufacturers were gradually excluded and had no choice but to go into other lines of business.

However, the Taiwan Seitou Co., Ltd. and other sugar manufacturers that had been producing alcohol from cane molasses using patent stills were exempted from monopolization under the rationale that the alcohol it produced was meant for export and transshipment to Japan. Likewise, the Takasago Beer Company was exempted because its operations had just begun and the timing was not right. As can be seen, the monopoly was for the benefit of the colonial government, allowing it to amass large amounts of capital through a new institutional structure.

When the monopoly was instituted, the Monopoly Bureau determined the types of alcoholic beverages that ought to be produced in the future. As a result, various local alcoholic beverages of Taiwan were excluded from production. Meanwhile, *mijiu*, cane molasses alcoholic beverage tangmijiu and Japanese *saké* were targeted for quality enhancement and mass production. The cane molasses used in the production of molasses based alcoholic beverages was purchased from sugar factories. Although the monopoly system, in which the government thoroughly controlled everything from production to sales, contributed to enhancing the quality of alcoholic beverages being produced, the system also protected Japanese capital and led to the extinction of the various unique local alcoholic beverages indigenous to Taiwan.

In 1910 only 2,458 *koku* of Japanese *saké* were produced in Taiwan, but with the advent of the Taisho Era the volume gradually increased. Immediately prior to the institution of the monopoly, volume had exceeded the 10,000 *koku* level. However, the scale of the breweries was small and few employed technicians. Although *saké* made in the relatively cool months of January through March was of a certain quality level, the quality of *saké* made in the summer months was poor. For a time, the Monopoly Bureau considered taking over the factory of Nihon Houjousha mentioned earlier, but because of the dilapidated state of the building production of Japanese *saké* was abandoned and a safer course of producing *mijiu* and *hongjiu* was taken. The method of producing Japanese *saké* at the Monopoly Bureau's Taizhong plant was for a time more backward than that in the days of Houjousha. For example, the plant had such poor

equipment for cooling that it simply used cold water or immersed the enameled fermentation tank in a water-filled concrete trough. If fermentation progressed too far, good results were not possible. Numerous measures had to be taken, such as installing full-scale refrigeration facilities and preventing contamination. Moreover, initially the raw material rice was brought from Japan so that production costs were high. The first Japanese *saké* brands were “Fukuroku,” synthetic *saké* using raw material purchased from Riken (the Science Research Institute), and “Manju” into which Rikenshu (synthetic *saké*) was partly admixed. Gradually, quality began to rise.

Full-scale year round production was first attempted in the mid-1930s. Refrigerating equipment was installed in a part of the Taizhong plant and the technicians were asked to switch from rice grown in Japan to Taiwan rice, to reduce electric cost from the 100 yen a day then prevalent, and to reduce production cost through mass production. Giving priority to rice as a staple food, the Monopoly Bureau recommended using Taiwan rice rather than rice from Japan proper to produce Japanese *saké*, as had been the case for *moto* (concentrated yeast mash) and *koji* (*Aspergillus oryzae*). Furthermore, the Monopoly Bureau recommended that Vietnamese rice be used for producing the cheap *mijiu*. As a result of negotiations with the Taiwan Electric Company, supplies of cheap electric power became possible. The new *saké* launched by the technicians was “Zuikou,” made from Taiwan rice, followed later by the top quality “Gaisen” made from rice grown in Hyogo Prefecture. Further, to respond to the growing demand for Japanese *saké*, a full-scale year round plant was completed on the outskirts of Taipei in 1939, and a respectable level of quality was achieved.

Although the fermentation industry flourished as a core industry in Taiwan prior to the war along with sugar manufacturing and electric power, with the outbreak of the Second World War Taiwan became a military outpost in the south and a base of the military food supply. As a result, the quality of the raw materials used in the manufacture of *saké* deteriorated.

Technicians and researchers of the Taiwan Government-General Monopoly Bureau such as Ryoji Nakazawa and Yoshito Takeda played a central role in enhancing the quality of alcoholic beverages in Taiwan. These technicians were students of Professor Teizo Takahashi of the Brewing Research Laboratory attached to the Department of Agricultural Chemistry in the Faculty of Agriculture of Tokyo Imperial University. From the late Meiji Era, Takahashi's students were active in universities in Japan, the Ministry of Finance Brewing Laboratory, Taiwan Government-General, South Manchuria Railway Company Central Laboratory, and Toa Dobun Shoin (a school organized by the East Asia Common Culture Society) in Shanghai.

Given preferential treatment in overseas colonies, these researchers were able to conduct research unfettered and produced significant results such as the realization of year round brewing and the industrialization of the amylo fermentation method and the acetone-butanol fermentation method.

After Japan's defeat in 1945, all plants of the Monopoly Bureau were transferred to the Taiwan Tobacco and Wine Monopoly Bureau. Such Chinese alcoholic beverages as *shaoxingjiu* and *kaoliangjiu* were revived, but for an appreciable length of time production of Japanese *saké* continued.

4. PRODUCTION OF JAPANESE *SAKÉ* IN MANCHURIA

Production of Japanese *saké* in Manchuria or what is today the North-Eastern (Dongbei) Region of China began with the large influx of Japanese immigrants after the Russo-Japanese War. It was around the year 1907 that Benzaburo Suzuka began a brewery in Dalian City in Guandong Province using Korean rice to produce 300 *koku* annually. Since Japanese *saké* brewing was tax free in the Guandong concession, including Dalian City and Lushun City, and in the land attached to the South Manchuria Railway Company, brewing first concentrated in Dalian with a large population of Japanese immigrants and later spread to such interior regions as Andong (present Dandong) in the south and Fengtian (present Shengyang) in the north.

As in the case of Taiwan, Manchuria is located in the vicinity of China and had a population of various ethnic groups. In the south, the distilled alcohol *kaoliangjiu* and the Shandong original *huangjiu*, made from millet, were being produced. In Harbin in the north, with a large population of Russians, small amounts of vodka and beer were being produced.

Production of Japanese *saké* as of 1919 was limited to Dalian with 9 breweries producing only 1,000 *koku* per year, while Japanese *saké* imported from Japan amounted to more than 10,000 *koku*.

Although the Central Laboratory of the South Manchuria Railway Company was involved in experimental production, this focused primarily on solid fermentation used in the production of *kaoliangjiu*, a major industry of Manchuria, together with soybean oil extraction. Unlike the case in Korea and Taiwan, strong administrative supervision, quality enhancement, and integration did not take place.

Even so, production of Japanese *saké* gradually increased, and in 1922 an alcoholic beverage tax was initiated in Guandong Province. At the same time, the Guandong Brewers' and Distillers' Association was formed. However, the quality of the alcoholic beverages produced along the South Manchuria Railway was extremely poor.

With the Manchurian Incident of 1931 and the formation of "Manzhouguo" (Manchukuo) in the following year, Japanese immigrants and the Japanese military presence increased (about 300,000 in 1933), and demand for Japanese *saké* also increased at a rapid pace. By 1932, production capacity in all of Manchuria had grown to 15,000 *koku*, while *saké* imported from Japan, comprised mostly of products of large manufacturers in Nada, had decreased to under 10,000 *koku*.

After the formation of "Manzhouguo," spurred by preferential treatment in plant location, manufacturers of Japanese *saké* increased particularly in Fengtian and Xinjing (Shinkyo, present Changchun). A bullish market prevailed in which, regardless of quality, all *saké* produced would find a ready market. This situation had much to do with the issue of taxation.

Japanese *saké* produced by Japanese citizens in the land attached to the South Manchuria Railway Company comprising the area from Dalian to Xinjing and on to Andong and within "Manzhouguo" was not subject to tax, while *saké* produced in Guandong Province and imported into "Manzhouguo" was subject to very little tax. In contrast, *saké* imported into "Manzhouguo" from Japan was levied a heavy tax of 50 yen per barrel. The price per Sho (1.8 liters) of *saké* produced in Japan was 3 times that of *saké* produced in Guandong Province so that competition was not possible. Mindful of the bullishness of the Manchurian market, breweries from Japan

opened plants in “Manzhouguo.” “Manshusenpuku” in the Fengtian industrial zone, Toyo Jozo Manshu Plant in Kaiyuan, Madonoume Shuzo in Jilin, and Hasegawa Shuzo in Zhaoyangchuan, located close to the border with Korea, are examples of these initiatives.

Looking at alcoholic beverage production in Manchuria from the technical perspective, Dalian in the south is situated at about the same latitude as the northeastern region of Japan and, with the climate being relatively moderate, no particular problems were encountered. However, in the interior of Fengtian and further north, as opposed to the situation in Taiwan, the temperature is too cold. It was reported that unless double layered brick walls with double windows and inner walls filled with rice hulls were used for thermal insulation, steamed rice often froze. On the other hand, there was one advantage in that the cold climate of the interior allowed production of *saké* to start early in the autumn.

To take an example of a brewery in the Jiandao region in the east, all equipment and containers were brought from Japan, and rice from Hyogo Prefecture or Okayama Prefecture was used for the *moto* for high quality alcohol beverages, while Korean rice was used for the *kakemai* (steamed rice added to *moromi*). For lower quality *saké*, only rice produced in Manchuria was used. Apparently, the quality of Manchurian rice left much to be desired.

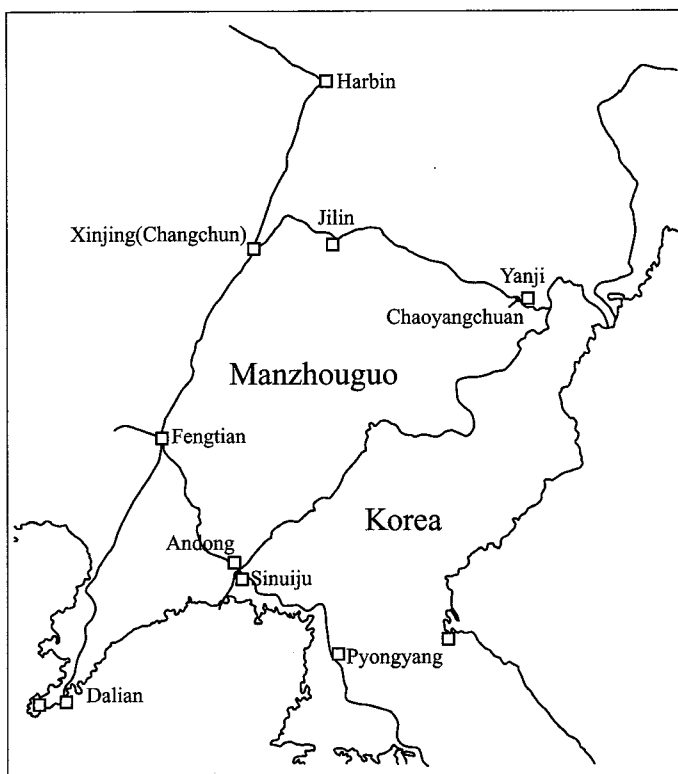
As far as the employees were concerned, everyone from the *toji* (chief brewer) to the *kashira* (sub-chief), *kojishi* (fermented rice maker) and *Kamagakari* (steamed rice maker) were invited from prefectures of northeastern Japan such as Akita and Iwate. The boiler man and general handyman were Koreans, since Korean labor was inexpensive, but various troubles were reported. Travel expenses for the *toji* from Japan were high, as were heating costs, and this meant that the price of *saké* was also high. But because at the beginning the product was not subject to taxation, local *saké* had an edge over products brought from Japan.

From the mid-1930s, some Chinese began drinking Japanese *saké*. As a result, annual production increased significantly to 66,000 *koku*. Moreover, with the introduction of the alcoholic beverage tax in Manzhouguo, Japanese technical officers of the Manzhouguo Economic Bureau began providing supervision to breweries in the various regions.

In general, the Japanese living in Manchuria were affluent and would not look twice at cheap *saké*, so that the demand for quality *saké* was strong, it is reported.

After 1940, *saké* for the military stationed in Manchuria commanded a large share of total demand. Although the production volume of *saké* for the military is not disclosed, it is estimated that the scale was on the order of several tens of thousands of *koku*. In order to supplement insufficiencies in the supply of rice for brewing, *saké* for the military was an alternate product called “New Japanese *saké*,” produced by adding alcohol, lactic acid, succinic acid and glucose to *moromi* (mash). This was produced on consignment in 13 plants. Since it was intensely popular, it is said that the products were constantly sold out.

Finally, as a special case of Japanese *saké* production in Manchuria, there was the *saké* produced by the Kaitakudan (Association of Colonists). Many of the Kaitakudan villages in the interior, in which armed immigrants had settled, lacked the conveniences of transportation and entertainment. The members of these associations were forced to live a life of self-sufficiency. As a result, Japanese *saké* was produced by the Kaitakudan villages, a practice that was approved subject to the product being sold in stores operated by cooperatives created with investment from association members.



Many villages of the Kaitakudan were granted permits in 1938 or 1939. By 1940, Japanese *saké* was being produced at 10 locations. The scale of the production was small, being between 30 and 200 *koku*. A preferential tax system was initiated in which production in the first year was tax free, one-third the production in the second year was subject to tax, two thirds in the third year and the total amount subjected to tax in the fourth year. In Iyasaka Village, considered exemplary among the Kaitakudan villages, the *saké* produced there was a regression to the days when farmers would produce their own brew. Although the building was new, the equipment used was simple, no specialized *toji* was available, and the rice grown by the members was used as raw material. This system was born of the Japanese desire to drink Japanese *saké* wherever they might be.

5. CONCLUSION

Gradually, Japan colonized her neighboring countries and built railroads in Taiwan, Korea, and Manchuria that played central roles in the development of agricultural product processing industries. Primary industries were sugar manufacturing in Taiwan, rice polishing in Korea, and soybean oil extraction in Manchuria. However, the way industrialization progressed differed from country to country. Whereas the sugar manufacturers played the central role in Taiwan, in Manchuria it was the South Manchuria Railway Company.

Production of Japanese *saké* must be viewed within the perspective of such progress in industrialization. The first thing that needs to be noted is that *saké* production contributed significantly to stabilizing the fiscal situation of the colonies. While the format differed, i.e., a monopoly in Taiwan and the private sectors in Korea, the alcoholic beverage tax commanded a large proportion of tax revenue as in Japan proper. The second point is that *saké* production that had in the past been a side business of drinking establishments and practically considered a non-legitimate business developed to the level of an industry. The Japanese system of quickly incorporating the scientific technology of the West and implementing intense government supervision and regulation led to changing the Chinese method of lining up vats on a plane to modern production methods using large tanks, as seen in the success of year round brewing and amylo fermentation. Production of *mijiu* using the amylo fermentation method and tank culturing of *hongjiu* are the first examples of the Japanese changing Chinese alcoholic beverage. Through such modernization, the fermentation industry in the colony of Taiwan actually led that of Japan proper for a time, and it may be said to have led to the development of the fuel alcohol industry of the Second World War years.

However, the Japanese propensity to pursue efficiency in fermentation techniques resulted in the disappearance of the local alcoholic beverage made from sugar cane in the case of Taiwan, and the home made alcoholic beverage that constituted entertainment for Korean farmers, thus forcing the indigenous people to buy Japanese *saké* and causing suffering among the people of the colonies. After the formation of “Manzhouguo,” numerous manufacturers of Japanese *saké* entered the market and profited by producing *saké* for the Guandong Army.

From the perspective of the appeal of Japanese *saké*, production of Japanese *saké* was originally limited to Japan, but by the end of the War years Japan had effectively disseminated the product among the Taiwanese, Koreans, and Chinese to a certain extent. And in Taiwan and Korea, production of Japanese *saké* continued in parallel with indigenous alcoholic beverages that were revived after the War. However, in terms of technology, significant progress from the pre-War days was slow in arriving.

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