

Chapter 6

Soybean Sauce Culture on the Korean Peninsula



Abstract As nomads from Northeast Asia moved south and settled into a tribal agrarian lifestyle with indigenous peninsular peoples, food culture slowly began to transform from being meat-based to vegetable-based. Widely-distributed soybeans came to replace meat as a major source of protein. Fermented soybeans would have played the important role of adding savory flavor to the bland staple foods prevalent at the time, rice and barley. Korean ancestors married the cereal alcoholic fermentation and salt preservation techniques from the days of Primitive Pottery culture with soybean fermentation. This chapter elucidates the origin and dissemination of soybean sauce, distinguishing between Korean *jang* and Chinese *shi*, and the characteristics of Joseon *jang* and specialty sauces in Korea.

As nomads from Northeast Asia moved south and settled into a tribal agrarian lifestyle with indigenous peninsular peoples, food culture slowly began to transform from being meat-based to vegetable-based. Widely-distributed soybeans came to replace meat as a major source of protein. At the same time, soybeans became the basis of many fermented food products. Fermented soybeans would have played the important role of adding savory flavor to the bland staple foods prevalent at the time, rice and barley. Korean ancestors married the cereal alcoholic fermentation and salt preservation techniques from the days of Primitive Pottery culture with soybean fermentation, so that by the early Three Kingdoms period (57 BCE–668 CE), the five types of fermentation culture underpinning Korean foodways today had already been completely formed: rice wine, *sikhae* (lactic acid fermented fish), fermented soybean sauces, fermented vegetables (kimchi), and *jeotgal* (salt-fermented seafood). These fermented foods governed the palate of Koreans for thousands of years, and today Koreans continue to enjoy the flavors and traditions of fermented foods.

6.1 East Asian Food Culture

Toward the end of the Neolithic era, the Dongyi tribes initiated the use of soybeans as food. Eating them cooked and in fermented sauces supplied protein and flavor to their grain-based diet. The nutritional boon these soybean-based fermented foods imparted is judged to have had an outsized influence on the historical development of the Han Korean tribes living in southern Manchuria and Korea. Increased consumption of high-protein soybean foods and fermented sauces enhanced the nutritional profile of the Han people such that they physically grew into an elite group during the founding of early nations in Northeast Asia. Archeological sites of the Liao River civilization, including Hongshan culture, and histories of Goguryeo attest that the Dongyi tribes' establishment of Gojoseon spearheaded advanced culture in the region. The dietary use of fermented soybeans was introduced to China in the seventh century BCE, and by the Han dynasty (206 BCE–220 CE), fermented soybeans, called *chi* (Kor. *si*), had already been broadly disseminated there. *Doenjang* (fermented soybean paste), a native Korean dish, was introduced to Japan as *maljang* in about the eighth century CE, during the Nara period. Naomichi Ishige, a food culture historian, divides East Asia into fish sauce culture and soy sauce culture, with Northeast Asia belonging to the latter (Ishige 1993; see Fig. 6.1). This demonstrates the enormous influence the fermentation techniques of Korea had on Northeast Asian culture formation (Lee and Kwon 2003; Lee 2021).

6.2 The Origin and Dissemination of Jang (Fermented Soybean Sauces)

The first mention of *jang* on Korean record appears in the third year of King Sinmun of Silla (683 CE) in *Samguk sagi* (History of the Three Kingdoms): Prior to the marriage of Kim Hun-Eum's daughter, the ceremonial wedding greeting (*pyebaek*) sent to the groom's family comprised 135 cartfuls of gifts, including rice, oil, rice wine, honey, *jang*, *si*, and meats. Although this is the first occasion of the terms “*jang*” and “*si*” found in Korean literature, fermented sauces existed long before the advent of writing, and references to *jiang* (Kor. *jang*) and *chi* (Kor. *si*) have been found in early records discovered at Mawangdui archeological site from Han dynasty China (Lee and Kim 2016).

In light of the phrase “he did not eat meat without its sauce [*jiang*],” found in book 10 of *Lunyu* (*The Analects of Confucius*, c. 450 BCE), it appears that fermented soybean sauces were already well-known during the Spring and Autumn period (771–476 BCE). Other Chinese records mentioning *jiang* include *Zhouli* (*The Rites of Zhou*, c. 300 BCE), which contains the phrase “120 *dong* (a unit of measure) of *jiang*,” and *Shiwu jiyuan* (*The origin of things*, 1197), which states that “The Duke of Zhou [d. 1032 BCE] made *jiang*.” However, some scholars refute the idea that the meaning of “*jiang*” in these texts refers to a sauce made of soybeans. Many instances

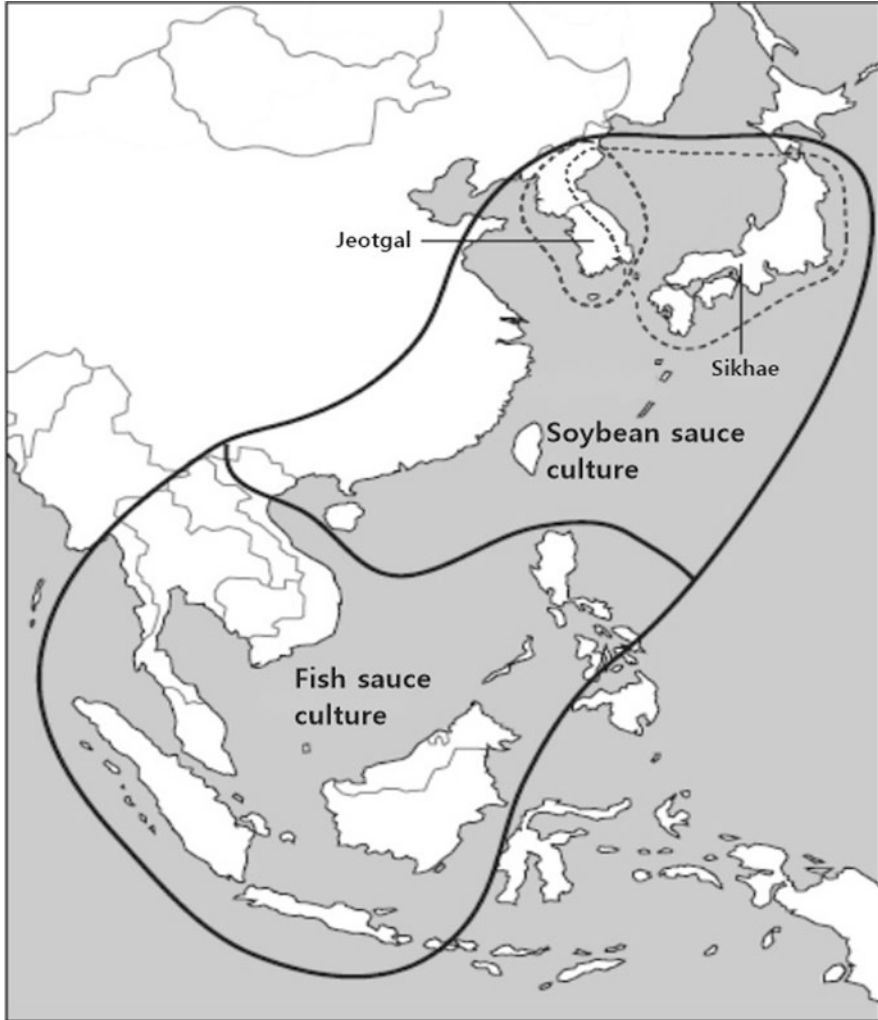


Fig. 6.1 Division of seasoned food culture in East Asia (Ishige 1993, modified by Lee 2021)

of “jiang” in ancient Chinese records may refer to yukjang (fermented meat sauce) (Lee and Kim 1998).

In the Goguryeo section of the “Dongyi biography” found in the “Book of Wei” of *Sanguozhi* (Records of the Three Kingdoms, c. 200 BCE), the people of Goguryeo are described as “*shan jiang niang*,” or “people who make good fermented soybean sauces.” *Haedong yeoksa* (History of Korea, 1823) quotes *Xin Tang shu* (New Book of Tang, 1060) as distinguishing “Chaekseong chi” from other chi (Kor. si), the former being a specialty item that hailed from Chaekseong, capital of Balhae (698–926, a kingdom founded by a defeated general of Goguryeo). Archeological evidence of jang includes a third-century mural from Anak Tomb

(North Korea) that depicts an earthenware crock typically used to contain fermented sauce. These sources situate fermented seasoning sauces as a well-known food product in the culture of their times. Unfortunately, documentation of specific kinds of fermented soybean sauces is not found until the later generations of the Goryeo dynasty (918–1392). One record from the Silla dynasty during the reign of King Weonseong (785–798) mentions *si*, and one from Goryeo reveals that *si* was used as a famine food (Chang 1993).

Although documentation of “*chi*” appears in Chinese literature earlier than “*si*” does in Korean records, the only seasoning flavors mentioned in the Confucian classic *Shangshu* (Book of documents, 551–479 BCE) are *yan* (salt) and *mei* (sour). In both *Li ji* (Book of Rites, 1046–256 BCE) and *Chu ci* (Songs of the South, Qu Yuan and Song Yu 200 s BCE), the query “What is *chi*?” appears. An Eastern Han dynasty (25–220 CE) dictionary, *Shuowen Jiezi* (Explaining graphs and analyzing characters, 100 CE), describes *chi* as “*peiyān rúshū*,” or salt-pickled beans. This likely refers to “soybeans fermented in a dark place with salt added,” which is similar to the *cheonggukjang* traditionally produced in Korea. A detailed description of this dish appears in *Qimin Yaoshu* (Essential skills to benefit the people, Jia Sixie c. 544), one of China’s first agricultural treatises, during the Northern Wei dynasty, a kingdom that engaged in significant cultural exchange with Goguryeo (Yoon et al. 1993). Meanwhile, the Jin dynasty record *Bowuzhi* (Records of diverse matters, Zhang Hua c. 290 CE) states, “There is *chi* in foreign lands,” and likewise, *Bencao gangmu* (Compendium of *Materia medica*, Li Zhizhen 1596) lists *chi* as a foreign food product. The Song dynasty text *Xuezhai zhanbi* (Simple observations, c. 1240) reads, “There is no mention of ‘*chi*’ in *Buddha’s Nine Discourses*, but the word is used in the local vernacular” (Lee and Kim 1998).

These concepts—the Dongyi peoples being first to use soybeans as food, fermented soybean sauces being a specialty of Goguryeo, the crock in the northern Korean tomb mural indicating fermented food storage, King Sinmun of Silla’s “*si*,” and the famous “Chaekseong *si*” from Balhae—all point to a long history of fermented soybeans in Korea, rooted in the northern regions of the country. In Korea “*si*” may refer to *cheonggukjang* (fermented soybeans) or *meju* (fermented soybean starter), but it was introduced to Han China (206 BCE–220 CE) as “salt-preserved beans” (*chi*). A fermented soybean sauce called *maljang*, which may also appertain to today’s *meju*, developed in the southern region of Manchuria. *Cheonggukjang* is made by fermenting soybeans for a short period of time in a warm place (ca. 40 °C); *maljang*, on the other hand, requires soybeans to be aged at room temperature over a long period of time in a bath of saltwater. *Maljang* crossed the sea into Japan and became what the Japanese now call *miso*. This evidence suggests, then, that the *jang* of Goguryeo instigated a robust culture of fermented soybean products in the three countries of East Asia that continue to be enjoyed today (Lee 1992).

The fermented soybeans and sauces, including *si*, made by the Dongyi tribes on the Korean peninsula developed in diverse ways after being introduced to China. For example, *Qimin Yaoshu* describes a number of *chi* recipes. As mentioned above, Korean *doenjang* (fermented soybean paste) was introduced to Japan during the

Nara period (710–784). In *Taihō ritsu ryō* (Taihō code, 701) the Chinese characters for jang, si, and maljang appear, and although the characters representing each of these words are different, they were read as homophones in Japanese: “miso.” In a Joseon translation dictionary encompassing five languages (*Bangeon jipseok*, 1766), the Korean word “jang” is listed as *wid* in Chinese, *misun* in Manchu, *wid* in Mongolian, and *miso* in Japanese. Dr. Lee Sung-Woo (1990) designed a flow chart indicating the different types of fermented foods produced in East Asia, with dissemination dates (Fig. 6.2).

The “Goryeo language” section of *Jilin leishi* (A miscellany of Goryeo matters, 1103), a text written by a Song dynasty emissary to Goryeo, explains that “*Jang* means *mizu*,” while in *Jeungbo sallim gyeongje* (Revised farm management, Yu Jung-Im 1766), the Chinese characters for maljang were pronounced as “myeojō.” Jang became more popular in Japan, and linguists suggest that over time, the term transitioned as follows: *misun-miljo-myeojō-miso* (Lee Sung-Woo 1990). According to Lee Sung-Woo, the Japanese philologist Kanazawa Shozaburo (1872–1967) discovered that Japanese miso probably originated in Manchuria, and author Kawada Masao classified ancient jang as yukjang (fermented meat sauce) in China, dujang (fermented soybean sauce) in Joseon, and *eojang* (fermented fish sauce) in Japan (Lee 1992).

6.3 Distinguishing between Jang and Si

It is unknown when the terms jang and si became differentiated in Korea, but the first known record to mention them separately is *Samguk sagi*, in the Silla annals, third year of King Sinmun’s reign (681–692). “Si” is no longer part of the current vernacular, but in Goryeo and Joseon dynasty records it is distinguished from “jang.” Choe Sejin’s *Hunmong Jahoe* (Collection of characters for training the unenlightened, 1527) states that the word “jang” means ganjang (fermented soy sauce) or jangyu (jang varieties), while “si” means *jyeonguksi* or *dusi*, referring to a type of doenjang (fermented soybean paste). The encyclopedia *O Ju-Yeon munjang jeonsango* (Yi Gu-Gyeong 1850s) reveals that today’s cheonggukjang used to be called *jeongukjang*, that is, a type of doenjang. Jung Yak-Yong’s linguistics text, *Aeongakbi* (Correct language dispels incorrect usage, 1819), clarifies that jang and si are not the same product, but si is classified as a type of jang. These texts reveal that after the formative period of fermented sauce production in Korea, and by the time these products were introduced to China and Japan, jang and si were evidently considered to be separate items: jang comprised doenjang (soybean paste) and ganjang (soybean sauce), while si referred to a specific type of doenjang (Chang 1993).

In China, jang and si may have been viewed as separate food items from the beginning. *Qimin yaoshu* (Essential skills to benefit the people) shows that the word *mai*qu (Kor. *maekguk*) also pertained to jang, and that, uniquely, wheat was added in order to produce a sweeter taste (Yoon et al. 1993; Nout et al. 2014). *Haedong*

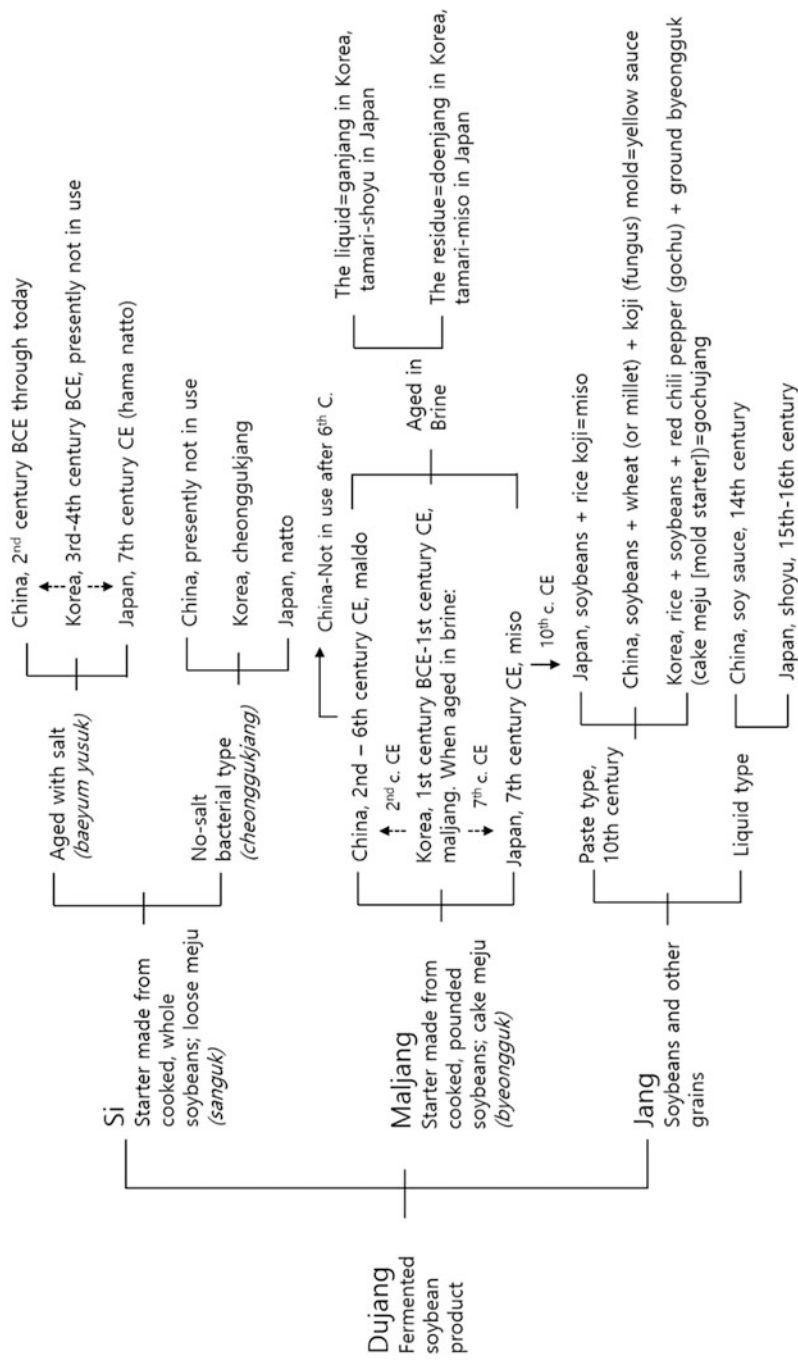


Fig. 6.2 Fermented foods of East Asia and their dissemination (Lee 1990)

Table 6.1 A comparison of Jang and Si in Korea, China, and Japan

		Korea	China	Japan
Jang	Base ingredients	Soybean meju (fermented soybean starter), mold (yellow spores)	Soybean meju (fermented soybean starter), maekguk (fermented wheat/barley starter), <i>duhwang</i> (yellow mold)	Soybeans, <i>miguk</i> (fermented rice starter), other starch starters
	Production method	Submerge meju in brine to ferment, then strain the liquids from the solids	Mix the ingredients and submerge in salted water	Mix powdered <i>koji</i> starter and cooked soybeans with saltwater
Si	Base ingredients	Soybeans, bacterial meju	Soybeans, mold meju	Soybeans, bacterial meju
	Production method	Make <i>siguk</i> (fermented soybean starter), then mix with saltwater and other seasonings to make seasoned sauces	Let raw soybean starter (<i>siguk</i>) dry, then submerge in salted water for a seasoned sauce	Raw <i>siguk</i> eaten as-is (<i>natto</i>)

yeoksa (History of Korea, 1823) reveals that jang sent as a tribute from Goryeo to China was received as a precious gift, thus indicating that Korean jang may have been a particularly coveted product (see Table 6.1) (Lee and Kim 1998).

In China, dehulled soybeans and mold spores were used to produce *sijeup* (extract of si) from *siguk* (fermented soybean starter). The Korean process of making si was similar, but used bacterial microbes produced during fermentation instead of mold spores. Judging from the appearance of the phrase “the fermented soybeans of Chaekseong” in *Xin Tang shu* (New Book of Tang), Korean si appears to have been a unique product in China. In Japan, soybeans were combined with different types of starchy cereal starters (*koji*) to make jang. According to the Heian period record *Engishiki* (Procedures of the Engi era, c. 927 CE), unique ingredients used in the making of jang included fermented rice starter and sweet glutinous rice. Fermented soybeans were made as a seasoning (*cheonggukjang*) in Korea and as a stand-alone dish (*natto*) in Japan.

6.4 Characteristics and Classification of Joseon Jang

Having been created long before the beginning of written history in Korea, jang formed an integral part of Korean foodways by the onset of the Joseon dynasty (1392), but because there is no extant Korean record of jang predating this period, the inevitable recipe changes that would have occurred over time can only be imagined. In “*Simu 28 jo*” (28 policy proposals, in *Dongmunseon*, an anthology of Korean literature, 1478) Goryeo politician Choe Seung-No (927–989) suggests to the king that jang, *ju* (rice wine), si, and *giang* (soup) be donated to poor people in

the streets, thereby highlighting the place of jang and si as staples in the Korean diet by the early Goryeo period. According to the *Sikhwa* (Food and money) volumes of *Goryeosa* (History of the Goryeo dynasty, compiled 1392–1451), the Khitan invasion in the ninth year of King Hyeonjong’s reign (1018) left cold and famine in its wake, and in response, the famine foods (salt and jang) were distributed to the suffering populace. During the famine in King Munjong’s sixth year (1052) the approximately 30,000 starving people in Kaesong were given rice, millet, and si (Lee and Kim 1998).

These records of famine relief foods in the Goryeo dynasty indicate that si and jang were distinct food products within the family of fermented sauces and that they constituted staple foods on a par with rice and millet. Not only were jang and si used as seasonings, but they were also valued for their medicinal properties, as seen in *Hyangyak gugeupbang* (First aid prescriptions using native plants, 1236), where jang is listed as a prescription for gonorrhea, and si is suggested as a medicine for eye diseases. Many records from the Joseon dynasty describe the manufacture of fermented sauces, and over the years wonderfully varied recipes were developed before modern Western food was introduced to Korea. This uptick in the variety of sauces, as well as in other traditional foods, could be called the golden age of Korean cuisine. Table 6.2 introduces a few of the historical and scientific works from the Joseon period that treat this topic (Lee 1981).

Jeungbo sallim gyeongje (Revised farm management), uses a play on words to emphasize the prominence of fermented sauces in the Korean diet: “Jang [sauce] is *jang* [a military general]: It is the foremost of all foods. No matter how good the vegetables or how tasty the meat in a home, if the jang lacks flavor, the cooking will not be good. Folks living in the countryside might not be able to afford meat, but as long as their jang is good, the flavor of their side dishes will soar. The head of the family should make it his will to let sauces age for long periods in order to obtain superb flavor.” During the Joseon dynasty, Koreans and their sauces were inseparable.

By tradition, meju (soybean fermentation starter) was made in the tenth or 11th month (autumn) of the lunar calendar and then fermented until the first or second lunar month (winter) of the following year, at which time soy sauce and doenjang would be made using the meju. Soybean-based jang was the most important ferment among Korean sauces, and Koreans loved—and still love—to eat it. The custom of making fermented sauces carried great meaning in the broader culture of Korean society. Korean foodways have altered significantly in the past 30+ years, as Koreans ride increasing waves of Western food culture, yet jang retains a key position in Korean cuisine (Lee and Kim 2016).

6.4.1 Characteristics of Joseon Jang

From ancient times the Korean people made jang and si separately, the mainstream type of jang being a dark sauce (*jin ganjang*) made by combining sludgy soy sauce

Table 6.2 Jang recipes as found in Joseon-dynasty literature

<i>Jeungbo sallim gyeongje</i> (Revised farm management, Yu Jung-Im 1766)	<i>Daemaekjangbeop</i> (barley sauce), <i>yuinjang</i> (elm sauce), <i>cheongtaejang</i> (green soybean sauce), <i>geupjojangbeop</i> (quickly-made sauce), <i>geupjocheongjangbeop</i> (quickly-made clear soy sauce), <i>geupjossangchojangbeop</i> (quickly-made double vinegar with red chili sauce), <i>jojeupjanggukbeop</i> (quickly-made vegetable sauce with meju), <i>Jeonjubang</i> (Jeonju sauce), <i>hajeoljeupjangbeop</i> (summer vegetable sauce), <i>jojeonsijangbeop</i> (jeonsijang [boiled soybean sauce]), <i>jeongukjang</i> (cheonggukjang [fermented soybeans]), <i>cheongtaejeonsijangbeop</i> (green soybean jeonsijang [boiled soybean sauce]), <i>susijangbeop</i> (watery soybean sauce), <i>gyenanjangbeop</i> (egg sauce), <i>jajangbeop</i> (roasted sauce), <i>jangbyeongbeop</i> (rice cake sauce), <i>damsujangbeop</i> (low-salt sauce), <i>cheollijangbeop</i> (1000-ri sauce)
<i>Gyuhap chongseo</i> (Women's encyclopedia, c. 1815)	Standard preparation of jang using water, meju, and crocks; <i>eojukjang</i> (fish sauce), <i>cheongtaejang</i> (green soybean sauce), <i>geupjocheongjangbeop</i> (quick clear soy sauce), <i>gochujang</i> (red chili soybean paste), <i>cheonggukjang</i> (fermented soybeans), <i>jeupji-i</i> (quick pickled vegetables sauce), <i>jipjang</i> (meju with gochu sauce; <i>jeupjang</i> , quick vegetable sauce; <i>dubujang</i> , soybean curd sauce)
<i>Imwon simyukji</i> (Encyclopedia of rural life), Seo Yugu c. 1827)	Jang: <i>Donggukjangbeop</i> (Korean sauce), <i>cheongdujangbang</i> (green soybean), <i>namchojangbang</i> (spicy chili pepper sauce), <i>suniljangbang</i> (10-day sauce), <i>junsunjangbang</i> (quick soy sauce), <i>damsujangbang</i> (low-salt sauce), <i>gamjangjeobang</i> (sweet sauce kimchi), <i>uijangsilmibang</i> (tasty medicinal sauce), <i>Junggukjangbang</i> (Chinese sauce), <i>yeolhwangjangbang</i> (agitated yellow sauce), <i>sanghwangjangbang</i> (soybean and flour meju sauce), <i>sodujangbang</i> (small bean sauce), <i>wandujangbang</i> (pea sauce), <i>duyubang</i> (soybean oil), <i>somaekmyeonjangbang</i> (wheat noodle sauce), <i>daemaekjangbang</i> (barley sauce), <i>bujangbang</i> (wheat bran sauce), <i>jimajangbang</i> (mushroom and hemp sauce), <i>mataekjangbang</i> (hemp sauce), <i>yuinjangbang</i> (elm sauce), <i>muijangbang</i> (turnip and ancient grains sauce) Si: (meju/cheonggukjang): <i>Damsibang</i> (low-salt si), <i>hamsibang</i> (salty si), <i>Geumsansasibang</i> (Geumsan Temple si method), <i>sudusibang</i> (watery si), <i>siphyangdusi</i> (ten-flavor soybean si), <i>Seongdobusijeupbang</i> (Seongdo si with vegetable sauce), <i>busibang</i> (wheat bran si), <i>gwasibang</i> (cucurbit si), <i>duhwangbang</i> (yellow soybeans si), <i>hongyeomdubang</i> (salted red soybean si)
<i>Gunhak hoedeung</i> (Encyclopedia of Korean traditional cuisine, mid-1800s)	<i>Chimeoyukjangbeop</i> (soybean sauce with fish), <i>saenghwangjang</i> (fresh yellow soybean sauce), <i>myeonjang</i> (noodle sauce), <i>sukhwangjang</i> (aged yellow soybean sauce), <i>daemaekjang</i> (barley sauce), <i>sodujang</i> (small soybean sauce), <i>cheongtaejang</i> (green soybean sauce), <i>yuinjang</i> (elm sauce), <i>Donggukjojangbeop</i> (Korean sauce), <i>geupjojangbeop</i> (quickly-made sauce), <i>chililjangbeop</i> (7-day sauce), <i>geupjocheongjangbeop</i> (quickly-made clear sauce), <i>jomanchojangbeop</i> (red chili paste), <i>somaengmyeonjangbeop</i> (wheat noodles sauce), <i>jojeupjangbeop</i> (quickly-made vegetable sauce), <i>Jeonjujeupjang</i> (Jeonju quick vegetable sauce),

(continued)

Table 6.2 (continued)

	<p><i>hajeoljeupjangbeop</i> (summer jeupjang), <i>jeonsijangbeop</i> (boiled si [cheonggukjang]), <i>susijang</i> (watery soybean sauce), <i>damsujang</i> (low-salt sauce), <i>cheollijang</i> (1000-ri sauce), <i>jangbyeongbeop</i> (rice cake sauce), <i>chojangbeop</i> (vinegar soybean sauce), <i>jajangbeop</i> (roasted sauce)</p>
<p><i>Yori jebeop</i> (Recipes for various dishes, 1913)</p>	<p>How to make meju. Jang: How to brew soy sauce; <i>eoyukjang</i> (fish sauce), <i>cheongtaejang</i> (green soybean sauce), <i>jeupjang</i> (quick vegetable sauce), <i>mujang</i> (Korean radish sauce), <i>miljang</i> (wheat sauce), <i>doenjang</i> (soybean paste), <i>mepssalgochujang</i> (nonglutinous rice red chili paste), <i>borigochujang</i> (barley red chili paste), <i>maekchapssalgochujang</i> (barley and glutinous rice red chili paste), <i>susugochujang</i> (sorghum red chili paste), <i>patgochujang</i> (red bean red chili paste), <i>mugeorigochujang</i> (soybean malt flour red chili paste), <i>tteokgochujang</i> (rice cake red chili paste), <i>yakgochujang</i> (medicinal red chili paste), <i>dambokjang</i> (quickly-made red chili paste)</p>
<p><i>Joseon mussang sinsik yori jebeop</i> (The best new Korean recipes, Lee 1924)</p>	<p>Jang recipes: Basic sauce recipes: <i>Ganjang</i> (soy sauce) and <i>jangjeup</i> (sauce with vegetables); <i>jangyu</i> (soybean sauces), <i>cheongjang</i> (clear sauce), <i>gamjang</i> (sweet sauce), <i>beopjang</i> (temple sauce). Myeaju (meju) recipes: <i>Maljang</i> (soybean paste), <i>hunjo</i> (soybean dumplings), <i>daekongjang</i> (large soybean sauce) <i>gajipjang</i> (cucumber and eggplant sauce), <i>mujang</i> (<i>damsujang</i>, low-salt sauce), <i>eojang</i> (fish sauce), <i>yukjang</i> (meat sauce), <i>cheongtaejang</i> (green soybean sauce) Quick jang recipes: <i>Suniljang</i> (10-day sauce) Quick clear soy sauce (<i>geupjocheongjang</i>) recipes: <i>Cheongjang</i> (clear soy sauce), <i>junsunjang</i> (quick soy sauce) Red chili paste (<i>gochujang</i>) recipes: <i>Gochojang</i> (red chili paste), <i>manchojang</i> (red chili paste) Quick red chili paste recipes: <i>Patgochujang</i> (red bean red chili paste), <i>byeorakjang</i> (lightning sauce), <i>dubujang</i> (soybean curd sauce), <i>bijjang</i> (bean-curd dregs sauce), <i>japjang</i> (mixed sauce) Fermented soybean paste (<i>doenjang</i>) recipes: <i>Seunggeoun doenjang</i> (low-salt soybean paste), <i>jjandoenjang</i> (salty soybean paste)</p>

with doenjang (fermented soybean paste). During the Joseon dynasty, many varieties of sauce were developed. By early Joseon, doenjang and ganjang (clear soy sauce) were being made separately, specialty meju was made by combining other cereals (wheat, barley, rice, etc.) with soybeans for the first time, specialty sauces such as *jeupjang* were made (sauce with vegetables: a quick sauce made by pulverizing meju, mixing it with doenjang, cooked barley, rice, vegetables, and other regional ingredients, then fermenting it in a crock 7–10 days), *jeongukjang* (cheonggukjang), and varieties of *damsujang* (low-salt jang) became more universal, and spicy sauces like *gochujang* were also introduced. The current method of making *cheongjang*

(or ganjang, clear soy sauce), by fermenting meju with salted water to produce doenjang and soy sauce, represents a centuries-old process for brewing jang that took root long before the appearance of other types of soybean-based, fermented sauces. From then until now the methods used to ferment each type of sauce have changed somewhat, from the ganjang produced in tandem with doenjang, to doenjang made in other ways, to gochujang, jeupjang, jeongukjang, and damsujang, all of which have been passed down to today. Aside from these few, specialty sauces have mostly disappeared, now existing only in the rarefied domain of gourmet chefs.

6.4.2 Classification of Joseon Jang

When fermented mold starter (meju) is steeped in salted water, the liquid that rises to the top is filtered out and becomes ganjang (soy sauce). The leftover solids become doenjang (fermented soybean paste). Doenjang is packed tightly into another crock, sprinkled with salt, and left to age for about a month before eating. Ganjang and doenjang made in this manner constitute the quintessential traditional sauces (jang) of Korea, both during the Joseon dynasty and today. The amounts of meju, salt, and water used in recipes varied regionally and over time, with slight adjustments made in an effort to continue improving the flavor of these cherished family sauces. Although the custom of making one's own family jang is disappearing, the degree to which these two sauces continue to hold sway on Korean tables is significant (Shin 2021).

Freshly-brewed soy sauce that is aged for years in an earthenware crock until it grows darker in color and develops a strong flavor is called *jinjang* (also *jinganjang* or *mugeunjang*). At the royal palace, “*jeol meju*,” a fermented cake often made of black soybeans, was placed into a large crock with salted water for several years to ripen into dark soy sauce. The meju cake would disintegrate when submerged in liquid for an extended period of time, and any solids that remained would be filtered out. The result was a sweet, intensely dark *jinjang*.

Another sauce frequently seen in Joseon dynasty records is called *gyeopjang*, which is made by adding the previous year's soy sauce to newly made meju and letting it age. The resulting sauce boasts an even stronger flavor than *jinjang*. Alternatively, the method of feeding soy sauce with additional ferments or mashes was sometimes used to improve the taste, similar to the method of brewing rice wine (see Chap. 9). Jang made in this way is called *deotjang*, or sometimes *hapjang* (“combination” sauce). In Chungcheong and Jeolla Provinces this sauce is called *jeopjang* (“grafted” sauce).

Makjang is a sauce made by pulverizing meju, mixing it with salted water to make a paste, and letting it age. This may be eaten as is or made into *ssamjang* (a sauce for grilled meat made principally of doenjang and gochujang that remains popular today). *Makjang* is still frequently seen in Gyeongsang and Gangwon Provinces, and although differences exist regionally, as in Chungcheong and Gyeongsang Provinces, it is usually called “*makjang*” because it is made to be consumed directly

(“mak” indicates now, or right away). Other names for it include *ppyamjang* or *ppagaejang* because the meju is pulverized (*ppata*). Ppyamjang is a fermented sauce produced mostly in Gyeongsang Province that is used only as doenjang. It is made by thickly grinding meju and then steeping it in boiled saltwater that has cooled. Ppagaejang is made in Chungcheong Province of pulverized meju steeped in the water leftover from cooking soybeans, mixed with hot pepper powder and salt.

Garujang is a Gangwon Province sauce made by grinding barley and steaming it, then mixing it with powdered meju and adding boiled, cooled saltwater to taste. The meju typically made for makjang is also used in this recipe, the difference being that in this case, the meju is mixed with barley flour. This is similar to how *borijang* is made on Jeju Island; barley is cooked and then fermented, after which it is dried and ground to a flour that is mixed, half at a time, together with meju powder. Table 6.3 summarizes these sauces.

6.5 Specialty Sauces

The poem “Six home-grown vegetables,” from Yi Gyu-Bo’s (1168–1241) *Dongguk Yi Sangguk jip* (Collected works of Minister Yi Gyu-Bo), mentions that in summer pickled turnips were eaten in fermented soybean sauces, while in winter turnips were consumed as kimchi. *Nongga jipseong* (A compendium for farmers, ed. Sin Sok 1665) contains a volume called *Sasichanyocho* (Necessities for every season, 1482), which describes fermentation methods for jang and other sauces and designates auspicious days for making jang and hapjang (“combination” sauces). This text introduces specialty sauces such as jeupjang (jang with vegetables) and *haejang*

Table 6.3 Types of Ganjang (Soy Sauce) and Makjang (Quick Sauce)

Name	Method	Characteristics
Jinjang (jinganjang, mugeunjang)	Soy sauce aged for several years	Dark color, strong flavor
Jinjang	Jeol (black soybean) meju steeped with soy sauce and aged; after some years the meju is scooped out	Meju made of black soybeans; used in the royal palace
Gyeopjang (deotjang, hapjang, jeopjang)	Last year’s soy sauce poured over this year’s meju	Dark taste, strong flavor
Makjang Ppyamjang Ppagaejang	Meju powder stirred into salted water and aged. Water from boiled soybeans mixed with meju powder, with red chili powder and salt added	Gyeongsang Province Chungcheong Province
Garujang Borijang	Steamed ground barley, with meju powder and salt added. Barley grains fermented and ground, then mixed with meju powder	Gangwon Province Jeju Island

(crab jang). *Jeungbo sallim gyeongje* (Revised farm management, 1766) is the first text to mention *manchujang* (gochujang, red chili paste) and jeonggukjang (cheonggukjang). An array of specialty sauces was developed during this period, but aside from gochujang and cheonggukjang, most are no longer in use (Lee and Kim 1998).

6.5.1 Gochujang (Red Chili Soybean Paste)

In 1984 Lee Sung-Woo published a theory, based on writings found in *Jibong yuseol* (the first encyclopedia in Korea, Jibong Yi Su-Gwan 1614), that gochu (Korean chili pepper) was first introduced to Korea from Japan during the Imjin War (Japanese invasion of Korea, 1592–1598). For many years this theory was widely taught and accepted, even to the point of becoming common knowledge in Korea. In 2011, however, Kwon, Dae-Young et al. discovered records indicating that Lee’s theory was in error: The fruit Japan introduced to Korea during the Imjin War was actually the *nammancho*, a pepper native to Southeast Asia. The *nammancho* is an extremely spicy, nearly toxic plant, different from the gochu pepper, which is a mildly spicy, sweeter variety of pepper long cultivated uniquely on the Korean peninsula. Oral tradition has it that before Yi Seong-Gye became the founding king of the Joseon dynasty, he tasted gochujang (fermented red chili paste) at the Buddhist temple Manilsa in Sunchang County, North Jeolla Province (Kwon 2019). Written records of gochujang during the early Joseon dynasty, including *Hyangyak jipseongbang* (Native medicinal prescriptions, Yu, Hyo-Tong et al. 1433), *Signyo chanyo* (Korea’s first book on dietetics, Jeon, Sun-Ui 1460), and *Euibang yuchwi* (A multi-volume collection of medical texts arranged by topic, 1477), reveal that gochujang was introduced mainly for use as a medicinal remedy, as in the following passage: “When the spleen or stomach is weak and the body lethargic, make chicken or pheasant stew and boil it with gochujang.”

Later records mention gochujang by different names. *Jeungbo sallim gyeongje* (Revised farm management) introduces gochujang as “*manchujang*,” revealing the recipe as follows: “To make a quick sauce, first pulverize makjang made from soybean meju and sift it through a sieve. Then prepare the following three flavors: per 1 *du* (18 L) of makjang powder, stir in 3 *hop* (540 ml) of gochu (chili) powder and 1 *seung* (1.8 L) of glutinous rice flour, and mix with high-quality ganjang (soy sauce) to make porridge. Pack the mixture into a crock and set it in the sun to mature. Traditional recipes add 5 *hop* (900 mL) of roasted sesame seed powder, though the oil from the sesame seeds will cause the sauce to spoil more quickly.” Aside from the measurement volumes, this 1766 recipe mirrors today’s gochujang recipe almost exactly. The endurance of this recipe stems from the harmonious flavor profile created by the combination of savory soybeans with the sweetness of glutinous rice, the heat of gochu, and the saltiness of soy sauce.

Gyuhap chongseo introduces the term “*gochojang*” (an alternate spelling of gochujang) and offers the following recipe: “If using one *mal* [18 L] of soybeans,

take 2 *doe* [3.6 L] of rice and make *muritteok* [white rice cake], then pound well with the cooked soybeans, shape, and ferment to make meju [for red pepper paste]” This passage suggests that gochujang meju was made separately from regular meju, and reveals that recipes for gochujang commonly included a carbohydrate or dried meat powder, jujubes, honey, or other additives—flavorful additions to gochujang similar to those found in recipes today. *Gyuhap chongseo* also indicates that among all the gochujang found in the eight Korean provinces, those made in the regions of Sunchang and Cheonan are exceptionally delicious—a statement that attests to the ubiquity and popularity of gochujang in nineteenth-century Korea.

6.5.2 *Cheonggukjang (no-Salt Fermented Soybeans)*

Cheonggukjang debuts in *Jeungbo sallim gyeongje* (Revised farm management) as “jeongukjang.” Here jeongukjang is described as *jojeonsijangbeop* (quick soybean sauce), which may have appeared first in the Chinese texts *Qimin Yaoshu* (c. 544) or *Bencao gangmu* (1596). The 1870 Korean encyclopedia *Myeongmul giryak* contains the phrase “*dusi sok cheonggukjang*” (cheonggukjang is a type of *dusi*, Chinese soybean paste), while *Jaryu juseok* (Explanations of the various characters, Jeong Yun-Yong 1856) mentions “*si (myeaju, baeyeomyusuk)*” (soybeans fermented with salt). In other words, in Chinese historical records, “chi” (Kor. “si”) represented meju, or salt-fermented soybeans, but the Korean specialty cheonggukjang was also referred to as “chi.” The word “cheonggukjang” is said to derive from the time of the Qing (Kor. “Cheong”) invasion of Joseon in 1636, when Mongol troops carried *si* as a healthy food suitable for transport. This story also lends itself to the origin of the word “jeongukjang,” or wartime sauce (literally, “warring nation sauce”), which in time came to be pronounced “cheonggukjang” (Lee 1984).

The “Joseon *si*” recipe found in *Jeungbo sallim gyeongje* (Revised farm management) reads, “Take 1 *du* (18 L) of soybeans, boil, and place in a straw bag to rest in a warm place for 3 days. Then open the sack and stir in 5 *doe* (9 L) of roasted soybean powder. Pound the mixture in a mortar and then dry in the sun. From time to time check the taste and add salt as needed. When the sauce tastes lightly salted throughout, scrape the mixture into a crock for storage.” The text goes on to say that one may add eggplant, cucumber, Korean radish, or other vegetables to make *jeupjang* (quick-fermented vegetable sauce).

Gyuhap chongseo states that to make cheonggukjang, the soybeans must be roasted first and then boiled, after which, they are left alone to ferment until stringy. “Stringy” refers to the sticky threads produced during fermentation, as seen in natto. In Jeolla and Gyeongsang Provinces, this kind of cheonggukjang was called *damppukjang*. *Damppukjang*, however, was also the word for a type of boiled *jjigae* (stew), in which the meju prepared for cheonggukjang was dried and pulverized for use as a powder base in the stew. This has led to some confusion about the precise meanings of these terms, but over time, “cheonggukjang” gained universal currency as a type of quick sauce—aged relatively little—for use in a stew called

cheonggukjang jjigae. Today cheonggukjang is made by inoculating the bacterium *Bacillus subtilis* into, or placing straw on top of, well-cooked soybeans, and then keeping them in a cloth bag in a warm place (40 °C) for 3–4 days until mucilaginous strings form. When eaten as is, this dish is known as Japanese natto. In Korea, it is crushed and mixed with salt and other spices, such as minced garlic, and stored in a crock to use in recipes as needed (Lee 1984).

6.5.3 Jeupjang (Quick-Fermented Sauce with Vegetables)

In *Sasichanyocho* (Necessities for the four seasons, 1482), the recipe for jeupjang is explained as follows: Add eggplant or cucumber and wheat bran to jang (fermented soybean sauce), then nestle the crock into warm horse manure to ripen. This method is similar to today’s pickled vegetables (*jangachi*), but with one basic difference: today the eggplant or cucumbers are salt-pickled first, then dried and mixed with doenjang or gochujang. Compared to the fifteenth-century recipe, the jeupjang of today is much less pungent. Regional dialects called jeupjang *jeupjeo*, *jeupdih* (here, “jeo” and “dih” refer to kimchi or pickled vegetables), *chaejang* (vegetable jang) and *malttong* jeupjang (horse manure sauce), since the crock was placed in manure during the aging process. A famous version of this sauce from the south gate area of Jeonju City, handed down over generations uniquely in the Baek clan, was called *Baekssijang* (Lee 1984).

When making jeupjang, any number of ingredients may be substituted for those in the *Sasichanyocho* recipe. For example, meju powder can be used in place of wheat bran, green chili peppers can replace red chili powder, and other vegetables, including Korean radish, may be added. The crock containing the completed sauce may be placed in plant compost rather than horse manure to ferment. Despite variations in ingredients, the steps involved in making jeupjang have remained relatively stable. For example, although *Jeungbo sallim gyeongje* introduces seven jeupjang recipes, five for jeupjang meju and two for summer jeupjang, they all follow the same production method: make the meju, add a vegetable, and place the crock in manure to ripen, just as described in *Sasichanyocho* nearly 300 years earlier.

6.5.4 Damsujang (Low-Salt Sauce) and Other Types of Jang

A passage in *Jeungbo sallim gyeongje* points to damsujang as the progenitor of today’s dampjukjang: “During *chuseok* [Korean fall harvest festival] make a slab of meju and let it ferment over the winter. In early spring rinse it, break it into chunks, and place it in the sun to dry. Then add hot water to 3–4 doe [5.4–7.2 L] of meju, salt lightly, and place it in a small crock for 6–7 days to ripen. Enjoy with young spring vegetables—the taste is fresh and delicious.” This quick doenjang, like makjang, would have been ready to eat even before *haetjang*, a fresh sauce traditionally made

once a year in the spring. In some regions, however, damppukjang and cheonggukjang (the latter of which is not low-salt) are considered to be the same, and therefore damppukjang may not definitively be equated with damsujang.

Today, damppukjang is made by grinding meju into a fine flour, mixing it with gochu (Korean red chili) powder, and loosening it in water to rest overnight. It is seasoned with soy sauce and salt. Regional variations on the sauce occur in Chungcheong Province, where meju powder and gochu powder are placed in the water strained from making bean curd, and in Hwanghae Province, where barley rice is boiled like porridge, and then meju powder, gochu powder, and salt are stirred in.

Many specialty sauces developed over time, such as Korean radish sauce, fish sauce, green soybean sauce, bean-curd dregs sauce, lightning sauce, sesame seed dregs sauce, leftover kimchi juice sauce, and beef doenjang sauce. Unique sauces were created specifically for famine relief: *doraji* (balloon flower root), *deodeok* (bellflower root), or soybean hulls were ground and mixed with soybeans to add more nutrients to meju. *Jeungbo sallim gyeongje* explains that balloon flower, bellflower, crab, shrimp, ginger, akebia vine fruit, meat, or bean curd can be added to a sauce for increased nutrition. Additional varieties of jang introduced in *Jeungbo sallim gyeongje* include red bean sauce, egg sauce, roasted sauce, rice cake sauce, and 1000-ri sauce, as well as a recipe for geupjocheongjang, or quick soy sauce, which is made by straining the liquid produced during meju fermentation.

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