

A Study of Ginseng Culture within 'Joseonwangjosilok' through Textual Frequency Analysis

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ABSTRACT

Through big data analysis of the 'Joseonwangjosilok', this study examines the perception of ginseng among the ruling class and its utilization during the Joseon era. It aims to provide foundational data for the development of ginseng into a high-value cultural commodity. The focus of this research, the Joseonwangjosilok, comprises 1,968 volumes in 948 books, spanning a record of 518 years. Data was collected through web crawling on the website of the National Institute of Korean History, followed by frequency analysis of significant words. To assess the interest in ginseng across the reigns of 27 kings during the Joseon era, ginseng frequency records were adjusted based on years in power and the number of articles, creating an interest index for comparative rankings across reigns. Analysis revealed higher interest in ginseng during the reigns of King Jeongjo and King Yeongjo in the 18th century, King Sunjo in the 19th century, King Sejong in the 15th century, King Sukjong in the 17th century, and King Gojong in the 19th century. Examining the temporal emergence and changes in ginseng during the Joseon era, general ginseng types like *insam* and *sansam* had the highest frequency in the 15th century. It appears that Korea adeptly utilized ceremonial goods in diplomatic relations with China and Japan, meeting the demand for ginseng from their royal and aristocratic societies. Processed ginseng varieties such as *hongsam* and *posam*, along with traded and taxed ginseng, showed peak frequency in the 18th century. This coincided with increased cultivation, allowing a higher supply and fostering the development of ginseng processing technologies like *hongsam*.

Keywords Joseonwangjosilok (朝鮮王朝實錄), textual frequency analysis, Joseon era, food culture, ginseng

INTRODUCTION

From the period of the Three States to the present, ginseng has symbolized South Korea's pivotal export commodity, garnering significance in diplomatic ties with various nations. Recognized in Eastern medicine as a superior medicinal herb referred to as 'suncho'(仙草) or 'baekcho'(百草), ginseng's exceptional medicinal properties have been acknowledged since ancient times.¹ As a result, the early establishment of national-level institutionalized management systems for harvesting and distribution attests to ginseng's vital role in international trade, a practice observed since early reigns. Its value extended beyond domestic use, being highly prized in international relations, especially with neighboring countries such as China and Japan.² Korea, since its foundation, strategically managed the harvesting of wild ginseng found across the Baekdu Mountains to ensure a stable supply for ceremonial purposes and royal demand, thereby introducing the tribute system known as 'gongsam'(貢蔘). This method aimed to secure domestically sourced ginseng, limiting

its foreign export through practices like *jinheon*(進獻), *dapye*(答禮) and *hasa*(下賜). Records from the 'Sejongsillokjiriji' document that over a third of the 329 administrative regions in Korea, around 112 locales, cultivated ginseng as either tribute or medical herb.³ However, as the late Joseon period unfolded, private trade of ginseng expanded amidst trends of *daenap*(代納) and *bangnap*(防納) while domestic and illicit trade surged, diplomatic-related exports notably decreased.⁴ Ginseng initially served as a precious medicinal herb for diplomatic rituals during early Joseon, limited to consumption by certain ruling elites. However, with increased cultivation of *gasam*(家蔘) in later periods, especially within household settings, its production surged. Consequently, the development of processing techniques like red ginseng broadened its consumption, transforming it into a valuable medicinal herb accessible to the general populace. Even today, the exceptional quality of South Korean ginseng is globally recognized, being a key agricultural export due to its high cultivation value per unit. However, recent South Korean ginseng products have faced challenges in terms of pricing and marketing strategies compared to competing nations. With advancements in technological capabilities among these competing countries, the gap in quality competitiveness has gradually narrowed. To enhance the export competitiveness of Korean ginseng, proposals suggest inducing mass popularity through the development of high-performance new products and

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implementing differentiation strategies by incorporating sensory and cultural elements into the products.⁵ Once a precious medicinal herb for diplomatic rituals and considered a luxury item, ginseng is presently perceived as an agricultural product, utilized in various culinary applications, and embraced by the general public as a functional food ingredient.

Until now, numerous studies in South Korea have corresponded with the prominence of ginseng, unfolding along two major axes. Research has extensively covered governmental ginseng policies concerning domestic commerce and international trade,^{2,6} sociological studies on the status and scale of ginseng trade,^{7,8} and biochemical investigations into ginseng's components and efficacy, totaling over 7,000 publications.⁹ Additionally, some scholarly works have delved into cultural-historical examinations, focusing on the activities of ginseng merchants.⁹⁻¹¹ However, these studies have mostly identified particular groups or eras, lacking a holistic, comprehensive cultural approach to the perception of ginseng throughout the entire *Joseon* era.

Recently, the '*Joseonwangjosilok*' has garnered attention as a significant source for establishing the identity of traditional Korean cuisine and enhancing its brand value.^{12,13} The '*Joseonwangjosilok*' stands as the sole chronicle encompassing historical facts of the entire *Joseon* period, holding immense documentary value and serving as essential foundational material for *Joseon* studies.¹⁴ Moreover, it stands as a representative historical text(史書) enabling scrutiny of dietary changes, development, and continuity. Previous studies on the dietary history within the '*Joseonwangjosilok*' encompass quantitative analyses of vegetables,¹² a study of fruit characteristics during the *Joseon* era through big data analysis,¹³ examination of seafood status and processed characteristics,¹⁵ research on food poisoning during the *Joseon* period,¹⁶ and an investigation into the perception characteristics of grains during the *Joseon* era.¹⁷ These studies utilize extensive data to conduct comprehensive and diverse analyses of correlations and significance.

Therefore, this study aims to explore the perception of ginseng among the ruling class during the *Joseon* period and its utilization through textual analysis of the '*Joseonwangjosilok*.' It seeks to provide foundational data that could be utilized in the development of ginseng as a high-value cultural commodity.

Materials and Methods

1. Subject

This study encompassed the analysis of ginseng-related records throughout the entire duration of the *Joseon* period, encompassing records from the '*Taejo Sillok*' to the final king, '*Soonjong Sillok*'.^{12,13} The '*Joseonwangjosilok*' covers a span of 518 years, documenting the reigns of 27 kings from *Taejo* to *Soonjong*, totaling 1,968 volumes in 948 books, serving as the subject of analysis. Data from both the original and translated versions of the '*Joseonwangjosilok*' were collected through web crawling on the National Institute of Korean History's website.¹⁸

The web crawling software, developed using Python 3.8, employed algorithms to automatically gather all *Hanja* and *Hangul* original texts. The web crawling process yielded a collection of 384,565 Korean original texts and 384,567 *Hanja* original texts, demonstrating a loss rate of 0.01%, as depicted in

Table 1. Data collection by web-crawling

Korean(N)	Missing(N)	Rate(%)	Chinese Characters(N)	Missing(N)	Rate(%)
384,565	39	0.01	384,567	38	0.01

<Table 1>.

2. Analysis tool

The data analysis involved using Python 3.8 to generate separate datasets categorized by year from the respective site. Subsequently, it entailed identifying necessary sentences and extracting URLs from all pages to generate a list of required content.^{12,13} The constructed web crawler navigated through the generated URLs, extracting and storing relevant information in the database.

3. Research Contents

To analyze ginseng-related articles within the '*Joseonwangjosilok*,' articles were read and categorized under specific categories of the website's record classification system that were highly likely to relate to ingredients and food items. These included economic-financial-tribute and offering articles, economic-agricultural-farming articles, agricultural technology, farming practices, forestry, animal husbandry, orchards and specialty crops, economic-financial-fishery and salt-farming articles, social-domestic-cooking, beverages, symbolic foods, social-customs-ceremonies, and banquets categories. Subsequently, related Chinese characters were extracted and classified.^{16,17} The frequency of extracted ginseng-related words serves as an indicator of how often specific words appear in the classified data, indicating the prominence of those words in the articles. Thus, this study conducted frequency analysis on meaningful words through the research process. This analysis aimed to discern how word frequencies differ across the entire dataset and according to specific reigns, revealing variations in word frequency based on different historical periods.

Results

The specific species of ginseng and its frequency of occurrence recorded in the *Joseonwangjosilok* The '*Joseonwangjosilok*' records various types of ginseng, aiming to understand the frequency of these records and to extract ginseng-related words for classification, as shown in <Table 2>. Classification methods for ginseng types vary: cultivation-based classification includes cultivated ginseng, wild ginseng, and mountain ginseng. Based on processing types, ginseng is classified as fresh ginseng, red ginseng, white ginseng, and taekuk ginseng. Depending on the region, it's divided into *Goryeo* ginseng, *hwagi* ginseng, *jeoncheol* ginseng, and *jukjeol* ginseng.⁵ Extracting ginseng-related words from the '*Joseonwangjosilok*' yielded diverse results, making it challenging to apply a single classification criterion. Therefore, these words were grouped into five categories based on their common characteristics. The collective noun '*sam*' (蔘), signifying ginseng as a whole, was classified as the representative group. The general ginsengs were classified by their growth environments as *sansam* (山蔘), *jinsam* (眞蔘), *insam* (人蔘). By shape, they were classified as *chaesam* (體蔘), *yanggacksam* (羊角蔘). By cultivated region, they were

Table 2. Classification and frequency of Ginseng in 『Joseonwangjosilok』

Category	Variation	Word	Number	Percent(%)
Representative CN ¹⁾	ginseng	蔘	2,627	68.6
Regular ginseng	Environment	<i>Jinsam</i>	1	0.13
		<i>Insam</i>	695	87.86
		<i>Sansam</i>	19	2.40
	Cultivated land	<i>Hosam</i>	4	0.51
		<i>Nasam</i>	44	5.56
		<i>Cheasam</i>	26	3.29
	Shape	<i>Yangkaksam</i>	2	0.25
subtotal			791	20.7
Processed ginseng		<i>Pasam</i>	36	18.65
		<i>Misam</i>	45	23.32
		<i>Hongsam</i>	22	11.40
		<i>Josam</i>	16	8.29
		<i>Posam</i>	40	20.73
		ginseng tea	34	17.62
subtotal			193	5.0
Public payment ginseng		<i>Seosam</i>	24	17.27
		<i>Byulmusam</i>	7	5.04
		<i>Gasam</i>	14	10.07
		<i>Hosam</i>	12	8.63
		<i>Gongsam</i>	82	58.99
subtotal			139	3.6
Trade ginseng		<i>Yedansam</i>	15	19.23
		<i>Sinsam</i>	26	33.33
		<i>Dansam</i>	35	44.87
		<i>Hwanpoomsam</i>	2	2.56
subtotal			78	2.0
Total			3,828	100

¹⁾ CN: Collective Noun

classified as *hosam* (胡蔘), and *nahsam* (羅蔘). Terms like *pahsam* (把蔘), *misam* (尾蔘), *hongsam* (紅蔘), *josam* (造蔘), *posam* (包蔘), and ginseng tea (人蔘茶) were classified as processed ginseng, denoting names obtained through ginseng processing. Expressions such as *saesam* (稅蔘), *byulmoosam* (別貿蔘), *gasam* (家蔘), *hosam* (蔘), and *gongsam* (貢蔘) were terms associated with ginseng used for tribute, hence categorized as tribute ginseng. Expressions like *yehdansam* (禮單蔘), *shinsam* (信蔘), *dansam* (單蔘), and *hwanpumsam* (換品蔘) were used in trade or diplomatic ceremonial contexts with other countries, classified as trade ginseng.

The total frequency of all extracted words related to ginseng in the records amounted to 3,828 occurrences. Among these, the unique term for ginseng, *sam* (蔘), appeared 2,627 times, accounting for 68.6% of the total. General ginseng constituted 791 occurrences (20.7%), processed ginseng amounted to 193 occurrences (5.0%), tribute ginseng appeared 139 times (3.6%), and trade ginseng accounted for 78 occurrences (2.0%).

When examining the quantitative frequency of ginseng expressions that reveal specific names for ginseng, within the category of general ginseng: *jinsam* appeared once, *hosam* four times, *chaesam* 26 times, *nasam* 44 times, *insam* 695 times, *sansam* 19 times, and *yanggaksam* twice. Among these, '*insam*' had the highest occurrence frequency at 87.86%, followed by *nasam* at 5.56%, *chaesam* at 3.29%, *sansam* at 2.40%, *hosam* at

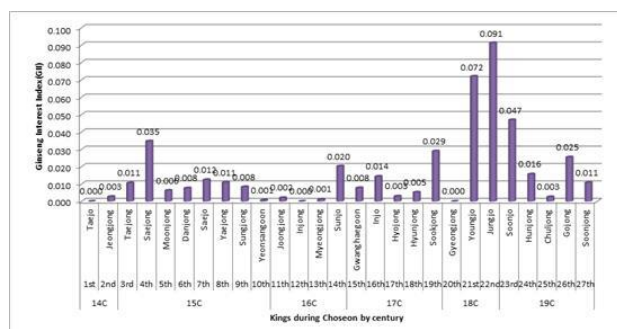


Figure 1. Ginseng Interest Index(GII) by kings during Joseon.

0.51%, yanggaksam at 0.25%, and jinsam at 0.13%.

In the processed ginseng category: *misam* appeared 45 times, *pasam* 36 times, *hongsam* 22 times, *josam* once, *posam* 40 times, and ginseng tea 34 times. *misam* had the highest occurrence frequency at 23.32%, followed by *posam* at 20.73%, *pasam* at 18.65%, ginseng tea at 17.62%, *hongsam* at 11.40%, and *josam* at 8.29%. *misam* refers to roots left behind during excavation or processing, while *josam* denotes fake ginseng made from other plants or counterfeit ginseng mixed half-and-half with ginseng or different plants.

For tribute ginseng: *sesam* appeared 24 times, *byulmoosam* seven times, *gasam* 14 times, *hosam* 12 times, and *gongsam* 82 times. *gongsam* had the highest occurrence frequency at 58.99%, followed by *gongsam* at 17.27%, *gasam* at 10.07%, *hosam* at 8.63%, and *byulmoosam* at 5.04%. *gongsam* refers to a regional ginseng delivered as tribute. For ginsengs traded: *yehdamsam* appeared 15 times, *sinsam* 26 times, *dansam* 35 times, and *hwanpumsam* twice. *Dansam* had the highest occurrence frequency at 44.87%, followed by *shinsam* at 33.33%, *yehdamsam* at 19.23%, and *hwanpumsam* at 2.56%. *Dansam* refers to ginseng given as a gift to envoys from Japan or *Daimado* during that time, similar to *yehdamsam* reas during the Joseon era.

The level of interest in ginseng during each reign of the Joseon Dynasty

Examining the interest levels in ginseng across the reigns of the 27 kings during the Joseon era, after adjusting the recorded frequencies of ginseng by the number of years in reign and the number of articles, a comparison was made to derive the ranking of interest across different reigns, as depicted in Figure 1. The interest level in ginseng during different reigns was defined as the GII (Ginseng Interest Index). To comprehend this, the absolute value of ginseng occurrence frequency was multiplied by the total articles generated during each reign period and divided by the duration of the reign, thus forming the function.^{12,13} The analysis revealed that the kings who showed the most interest in ginseng were King Jeongjo and King Yeongjo in the 18th century, King Soonjo in the 19th century, King Sejong in the 15th century, King Sukjong in the 17th century, and King Gojong in the 19th century.

Among these kings, King Jeongjo (正祖, 1752-1800) exhibited the highest interest in ginseng. King Jeongjo, the 22nd monarch of Joseon, reigned for 24 years and is renowned as a ruler who achieved reforms and unification in 18th-century Joseon. For instance, in the year of King Jeongjo's ascension (1776) May 28th, 鰲興府院君 金漢考送言於臣曰 進御湯劑

參用貢蔘羅蔘 何不純用羅蔘 旋因宗戚家納童蔘與羅蔘 純用湯劑 其時往復 (Oh heung Boowongoon Kim Han Goo said this to me: “The tangyak sent to the king uses *gongsam* and *nasam* as ingredients. You might ask why it uses both of the *sams*, instead of using just *nasam*? This is because I have used *dongsam* from a relative's place, along with *nasam*”). In King Jeongjo's 24th year of reign (1800) June 28th, 時秀曰 蔘茶今方待令矣 上 不答 又奏曰 蔘茶煎入稍久矣 上 進御 (Shisu said, “I have brought ginseng tea, but *Sang*(King) did not respond. I requested *Sang* to drink, since some time has passed since the tea was brought. Then *Sang* drank it”). *Nasam*, with the most medicinal quality among the ginsengs, were used as ingredients for *tangjea*(herbal decoction) in the 18th century royal palace. It can be known that *nasam* were also used to brew ginseng tea.

In the year of King Jeongjo's ascension (1776) August 11th, 遣內醫院官 賜人蔘于執義金亮行 優禮也 (A government official was sent to *Naeuiwon* to bestow ginseng to *Kim YangHang* as a token of respect). Like this, ginseng was a valuable gift given by the king to his subjects. In King Jeongjo's 14th year of reign (1790) April 30th, 聞羅蔘絕貴之弊 亦由嶺營官屬 都賈輩權利操縱之故 以五六倍之厚價 而進上所封 皆是家蔘 以致連次退却 事極寒心 (*Nasam*'s supply shortage was caused by *Youngnam Gamyong* officials and private merchants monopolizing rights to trade them. Their prices increased five and sixfold because the other ginsengs are deemed as '*gasam*'. This monopolized situation appears deeply disappointing and pointless). '*Nasam*', sourced from *Gyeongsang* Province, were specifically used as tributes. These premium ginseng were the most expensive type of ginseng. In King Jeongjo's 21th year of reign (1797) June 25th, 始節目有紅蔘造蔘等語 又令方外十五人作契 上覽之 謂右議政李秉模曰 蔘包節目事 欲爲下詢於日前實對而未果矣 (There were words such as *hongsam*(red ginseng) or *josam* in the first, and 15 people were made to meet. But when *Sang* saw it, he tried to ask *Lee ByungMo* about *Sampo* in bedside the other day, but he failed to do so.) Such records mark the appearances of fabricated *insam*, also known as *hongsam*, and counterfeit *insam*, also known as *josam*. This historical record indicates King Jeongjo's interest and involvement with ginseng, particularly the highest quality ginseng called '*Nasam*,' its usage in tea and medicinal practices, and its significance as a tribute and a valuable commodity.

Second in ginseng interest was King Yeongjo (英祖, 1694-1776). He reigned as the 21st king of Joseon for 54 years, marking the longest reign in Joseon's history. Renowned for fostering culture alongside a robust royal authority, King Yeongjo implemented various policies related to ginseng. In King Youngjo's 7th year of reign (1731) December 26th, 國恤三年祭需中 人蔘正果 所費甚多 以無益害有益者 政指此等物 (For three years of *Gooksang*(National funeral), there were records of a considerable consumption of ginseng *jeonggwa* during ancestral rites. The idiom “useless things harm the beneficial ones” refers to goods like this ginseng extract. In King Youngjo's 27th year of reign(1751) November 23rd,

此後凡祭名以漢果者 一竝蠲減 人蔘正果之屬 亦爲減除 永爲定式 (It was recorded to rid of all the traditional Korean sweets(*Hangwa*) in all the rituals, including the likes of ginseng *jeonggwa*. Removal of these sweets was to be made regulation permanently). It can be known that the Ginseng *Jeonggwa* was a type of *Hangwa* ritual offering in the royal palace at the time. In King *Youngjo*'s 13th year of reign(1737) August 11th, 藥房請對四啓 答曰 蔘尤進御 而中氣不平 不得進御矣 至八啓無批 政院啓請復膳 答曰 (One's upset stomach did not alleviate after eating *insam* and *changchul*. One requested eight times that one could not eat a meal, but there was no response). In King *Youngjo*'s 34th reign(1758) December 14th, 藥房煎進人蔘養胃湯 (*Insam Yangjootang* was brewed in *yakbang* and brought to king). In King *Youngjo*'s 34th reign(1758) December 15th, 丁卯 藥房煎進人蔘養胃湯 (*Insam Yangjootang* was brewed in *yakbang* and brought to king). It can be confirmed that King *Youngjo* enjoyed *insam* as *tangyak*.

Additionally, in King *Youngjo*'s 52th(1776) March 6th, 仰瞻睿顏 汗氣恒流 以此觀之 氣虛可知 當以一錢重蔘煎粟米飲以進矣 王世孫泣而不答 (The *Yean*(face) was flowing with cold energy, which indicated that the king was weak. It was recommended that the king should eat millet rice with one don of *insam*, but *Wangseson* cried and did not answer). In King *Youngjo*'s 37th reign(1761) March 24th, 命理中建功湯 日再煎入 人蔘二錢重 粟米飲煎入 (*Eeejoonggungongtang* was ordered to be given twice a day. Two dons of *insam* were brewed, so they could be consumed with millet rice). Such records indicated that King *Youngjo* enjoyed *insammeeum* with *insam* and millet rice. In King *Youngjo*'s 42th reign(1766) October 11th, 丁未 內局入侍 上曰 予所服蔘 今至幾斤乎 醫官李以楷對曰 自壬申至今過百餘斤矣 (He said, "How many *geuns* of *insam* have I taken so far?" and the head doctor *Lee LeeHae* answered, "Since the *Imsinnyun*, more than 100 *geuns*").

Third in ginseng interest was King *Soonjo* at the early 19th century. *Soonjo*(純祖, 1790-1834) was the 23rd King who wanted to follow the exemplary policies set by the previous King, *Jeongjo*. In King *Soonjo*'s 5th reign(1805) January 12th, 命大王大妃進御人蔘一兩重參橘飲一貼

一兩重蔘桂飲二貼煎入 (There are entries noting the preparation of one *chup* of '*samgyuleum*' with one *nyang* of *insam* and two *chups* of '*samgyeeum*' with two *nyangs* of *insam* for the Great Queen Mother). Such records show that beverages like *samgyuleum* , a drink containing *insam* and tangerine peel, and *samgyeeum*, drink containing *insam* and willow bark, were commonly consumed in the palace. In King *Soonjo*'s 13th reign(1813) December 25th, 藥院入診 清心溫膽湯滿二十貼停止 自再明日 更以雄朱丸三丸 用人蔘石菖蒲茶進御 (It made a visit from Chungyakwon. The *chungshimondamtang* were stopped given after 20 *chups*. In two days, three pills of *ungjoohwan* will be given again, along with *insamsukchangpocha*). In King *Soonjo*'s 14th reign(1814) January 4th, 藥院入診 自是日進人蔘石菖蒲茶 (It made a visit an herbal medicine shop, from this day, *insamsukchangpocha*

was given to the King). In King *Soonjo*'s 14th reign(1814) January 25th, 進御雄朱丸及人蔘石菖蒲茶停止 (*Ungjoohwan* and *insamsukchangpocha* treatment was discontinued). In King *Soonjo*'s 14th reign(1814) September 30th, 藥院請診不許 進人蔘六一散 (*Yakwon* requested to perform to take the pulse, but it was not permitted. *Insamyookilsan* was brought to the King). In King *Soonjo*'s 14th reign(1814) August 12th, 命惠慶宮 進服人蔘養榮湯一貼煎入(It was ordered to brew and give 1 *chup* of *insamyoungyangtang* to the *HyeKyunggoong*). In King *Soonjo*'s 30th reign(1830) May 4th, 藥院入診于王世子 時原任大臣閣臣 同爲入對于熙政堂 進人蔘瓜竹飲 又令滋陰化痰湯煎入 令藥院竝直(It made a visit an *Yakwon* to the Prince, *Shiim Daeshin*, *Wonim Daeshin*, and *Gakshin* together brewed *insamgwajookum* at *Hwejungdang*. *Jahumhwadamtang* was to be brewed to the Prince as well). In King *Soonjo*'s 15th reign(1815) December 14th, 嘉慶甲 命惠慶宮進服一兩重人蔘粟米飲煎入 又命蔘橘茶 調竹瀝煎入 又命一兩重人蔘粟米飲煎入 (It was ordered to brew one *nyang* of *insamsokmeeum* to the *Heeahgyungoong*. *Samgyulcha* coupled with *jookryuck* was to be given also. As well as one *nyang* of *insamsokmeeum*). In King *Soonjo*'s 15th reign(1815) December 15th, 命惠慶宮 進服蔘橘茶煎入 又命梨乳膏煎入 又命一兩重人蔘粟米飲煎入 (It was ordered to brew *samgyulcha* to the *Heeaggyungoong*, along with *eeeyougo*. Also, one *nyang* of *insamsokmeeum* was to be prepared for her). Such entries were recorded. These historic entries reveal that people at the royal palace regularly consumed not only *insam* tea, but also *insamsokmeeum* during King *Soonjo*'s reign, similar to records from King *Youngjo*'s reign.

Among all the kings of the Joseon Dynasty, the fourth in terms of interest in ginseng was King *Sejong* (世宗, 1397-1450). *Sejong* is evaluated as one of the most accomplished rulers in our history for bringing a golden cultural age to Joseon. In King *Sejong*'s ascension year(1418) September 12th, 遣知申事河濱 問安於使臣 仍贈細苧麻布并四十匹人蔘三十斤 頭目二各贈苧麻布六匹 其餘贈物 依黃儼例 (There were records of sending *Jishinsah Ha Yeon* to greet and give fourty pills of *semoshi*, *sambae*, thirty *geuns* of *insam*, six *moshi sambae* to the two head figures, along with other items, to the Ming Dynasty envoy as royal tokens of respect. In King *Sejong*'s 1st reign(1419) June 10th, 天貺資臻 特蒙殊錫 土宜雖薄 聊表謝忱 謹備黃細苧布三十匹白細苧布三十匹 黑細麻布五十匹 滿花席二十張 黃花席二十張 雜彩花席二十張 人蔘一百觔 松子三百觔 右件物等 製造匪精 名般甚寡 庶諒由中之信 俯容享上之儀 (Emperor of Ming continuously sent gifts to Joseon. As a response to this, it was said that "This generosity was sudden, so please take our crude and rather raw products that are few in numbers. We prepared respectfully: thirty pills of *hwangsejuhpoo*, thirty pills of *baeksejuhpoo*, fifty pills of *heuksemapo*, twenty jangs of *manhwasuk*, twenty jangs of *jahpchaehwasuk*, one hundred *geuns* of *insam*, and three hundred *geuns* of pine nuts. Accept them, as they reflect our gratitude and trust towards the Emperor

of Ming Dynasty. Please forgive and overlook the difference in the size of our tribute with your generous heart and our loyalty to you"). In King *Sejong's* 5th reign(1423) March 4th, 元珍本是我國人 請於上項三州都摠日向太守源久豐處修書 請刷被虜我國人 授元珍送還 仍贈虎皮花席絛絢苧麻布人蔘 松子等物 亦贈元珍衣一襲并笠靴 從之 (*YoungRakwonjin* was originally a Korean. Wonjin sent a letter to three State *dohchong ilheang taesu onegoopong*, requesting that our captive be returned to *Joseon*. The captive was sent back to us. As a result, the King rewarded *Wonjin* with an apparel, gat, and even a pair of shoes. Consequently, *Onegoopong* was also rewarded with tiger skin, flower pillow, *myeonjoo*, *moshi*, *mapo*, *insam*, and pine nuts. Just as the records stated, the fifteenth century Joseon needed to stabilize its diplomatic relationship with China, now shifting from Won to Ming Dynasty. Historically highest number of envoys moved between these two countries. To respond to the change, Joseon *insam*(ginseng) was sent to both the Emperor of Ming and foreign Ming envoys in forms of *jinhunsam* and tokens of gratitude, respectively.⁴ Additionally, in King *Sejong's* 14th reign(1432) December 3rd,

贈昌盛張定安人蔘各三十斤(there was a record of gifting 30 *geuns* of ginseng each to *Chang Sung* and *Jang Jeong-an*), showcasing how *Joseon* ginseng was also used as a valuable gift by the king to his courtiers.

The Characteristics of Ginseng Culture by Century

To understand the characteristics of ginseng culture across different eras, an analysis was conducted on the frequency of occurrence of ginseng by specific types across centuries, as shown in Table 3. There were a total of 23 types of ginseng recorded in the annals, with a frequency of 3,828 mentions. Excluding the general term *sam* (蔘), there were 22 specific types of ginseng identifiable, amounting to 1,201 mentions.

In the records from the 15th century, there were 440 mentions of ginseng (63.3%), 6 mentions of *sansam* (31.6%), and 4 mentions of *gongsam* (4.9%). In the early *Joseon* period, ginseng served as a high-value medicinal product primarily given as tribute to the central authority, extensively used as diplomatic gifts in relations with China and Japan. Consequently, the ginseng procurement method during the early *Joseon*

Table 3. Classification and frequency of Ginseng by century

Category	Variation	15C	16C	17C	18C	19C	Total
	Ginseng 蔘	502(19.1) ¹⁾	82(3.1)	393(15.0)	1,225(46.6)	425(16.2)	2,627
Regular ginseng	<i>Jinsam</i> 眞蔘	-	-	-	1(100)	-	1
	<i>Insam</i> 胡蔘	-	-	-	4(100)	-	4
	<i>Sansam</i> 體蔘	-	-	-	26(100)	-	26
	<i>Hosam</i> 羅蔘	-	-	-	40(90.9)	4(9.1)	44
	<i>Nasam</i> 人蔘	440(63.3)	13(1.9)	84(12.1)	106(15.3)	52(7.5)	695
	<i>Cheasam</i> 山蔘	6(31.6)	3(15.8)	1(5.3)	2(10.5)	7(36.8)	19
	<i>Yangkaksam</i> 羊角蔘	-	-	2(100)	-	-	2
	subtotal	446(56.4)	16(2.0)	87(11.0)	179(22.6)	63(8.0)	791
Processed ginseng	<i>Pasam</i> 把蔘	-	-	35(97.2)	1(2.8)	-	36
	<i>Misam</i> 尾蔘	-	-	-	45(100)	-	45
	<i>Hongsam</i> 紅蔘	-	-	-	3(13.6)	19(86.4)	22
	<i>Josam</i> 造蔘	-	-	-	13(81.3)	3(18.8)	16
	<i>Posam</i> 包蔘	-	-	-	4(10.0)	36(90.0)	40
	ginseng tea 蔘茶	-	-	1(2.9)	32(94.1)	1(2.9)	34
	subtotal	-	-	36(18.7)	98(50.8)	59(30.6)	193
Public payment ginseng	<i>Seosam</i> 稅蔘	-	-	2(8.3)	22(91.7)	-	24
	<i>Byulmusam</i> 別貢蔘	-	-	-	7(100)	-	7
	<i>Gasam</i> 家蔘	-	-	-	12(85.7)	2(14.3)	14
	<i>Hosam</i> 戶蔘	-	-	-	8(66.7)	4(33.3)	12
	<i>Gongsam</i> 貢蔘	4(4.9)	-	8(9.8)	45(54.9)	25(30.5)	82
	subtotal	4(2.9)	-	10(7.2)	94(67.6)	31(22.3)	139
Trade ginseng	<i>Yedansam</i> 禮單蔘	-	-	-	12(80.0)	3(20.0)	15
	<i>Sinsam</i> 信蔘	-	-	-	15(57.7)	11(42.3)	26
	<i>Dansam</i> 單蔘	-	-	-	19(54.3)	16(45.7)	35
	<i>Hwanpoomsam</i> 換品蔘	-	-	-	-	2(100)	2
	subtotal	-	-	-	46(59.0)	32(41.0)	78
	Total	952(24.9)	98(2.6)	526(13.7)	1642(42.9)	610(15.9)	3,828

¹⁾ Number(percent)

government remained primarily within the framework of tributary obligations, overseen by the administrative office, *Hojo*. *Hojo* was responsible for the distribution and trade of ginseng and regulated ginseng commerce with China and Japan.²

During the 16th century, there were 13 mentions of ginseng (1.9%) and 3 mentions of sansam (15.8%), marking the lowest frequency of occurrence throughout the *Joseon* Dynasty. After the Imjin War, *Ming* military forces and merchants directly entered the Korean Peninsula, engaging not only in military activities but also in commercial endeavors. They took substantial amounts of ginseng back to *Ming* China. In King *Sunjo*'s 6th reign(1573) July 28th, 司憲府啓曰 市里之民方苦人參貿易 又督納別造弓黑角六百張 (it was noted that the common people were suffering due to ginseng trade and urged the provision of six hundred *heukgak* used in special palaces). The latter half of the 16th century saw an accelerated taxation and increased suffering of the common folks, as noted by the *Sahunboo*.

In the 17th century, there were 84 mentions of ginseng (12.1%), 1 mention of *sansam* (5.3%), 2 mentions of *yanggaksam* (100%), 35 mentions of *pasam* (97.2%), 1 mention of *insamcha* (2.9%), 2 mentions of *sesam* (8.3%), and 8 mentions of *gongsam* (9.8%).

The 18th century witnessed the highest variety and frequency of ginseng types. Among the common ginseng types, *jinsam* had 1 mention (100%), *hosam* had 4 mentions (100%), *chaesam* had 26 mentions (100%), *nasam* had 40 mentions (90.9%), *insam* had 106 mentions (15.3%), *sansam* had 2 mentions (10.5%), and among processed ginseng, *pasam* had 1 mention (2.8%), *misam* had 45 mentions (100%), *hongsam* had 3 mentions (13.6%), *josam* had 13 mentions (81.3%), *posam* had 4 mentions (10%), *insamcha* had 32 mentions (94.1%). Among the tribute ginseng, *sesam* had 22 mentions (91.7%), *byulmusam* had 7 mentions (100%), *gasam* had 12 mentions (85.7%), *hosam* had 8 mentions (66.7%), and *gongsam* had 45 mentions (54.9%). Among the traded ginseng, *yedansam* had 12 mentions (80%), *sinsam* had 15 mentions (57.7%), and *dansam* had 19 mentions (54.3%). The 18th century witnessed the introduction of *jinsam* (true ginseng), symbolizing authentic ginseng or the ginseng of the *Goryeo* Dynasty. In King *Youngjo*'s 45th reign(1769) November 22nd, 禁胡蔘之買賣者 時 人蔘價踊 多有貿來北京胡蔘者

而其實非真蔘也 (It was recorded that prohibiting the sale of *hosam*, as the price of ginseng surged, resulting in many buying *hosam* from Beijing that were not genuine ginseng). Another new type of ginseng that emerged in the 18th century was *josam* (造蔘, manufactured ginseng). In King *Youngjo*'s 28th reign(1752) June 13th, 又教曰 今覽造蔘 以細辛作塑以蔘皮糊封 何異納鉛乎 (People were producing *josam* using *zokduri* herb roots to imitate the appearance of genuine ginseng by covering it with ginseng peel, revealing the creation of counterfeit ginseng. This is not different than offering crude lead). As suggested by the records, 18th century's ginseng price continued to inflate, giving birth to counterfeit ginseng like *josam*. Another counterfeit type introduced in the 18th century was *gasam*. In King *Jungjo*'s 14th reign(1790) July 25th, (*Naewiwon Jaejo Hong Uk* said, "Matters regarding medicine used in *uhjun* are gravely serious." However, the prevalence of *gasam* from *Gyeongsang-do* and *Wonchun-do* (*Gangwon* Province) gained popularity. *Gasam*, mostly being cultivated

ginseng from rural households, continued to be offered to the King. *Gasam* cultivation marked a revolutionary increase in the logistics of ginseng in the *Joseon* Dynasty, which had previously relied on wild ginseng collection.

In the 19th century, there were 4 mentions of *nasam* (9.1%), 52 mentions of *insam* (7.5%), 7 mentions of *sansam* (36.8%), 19 mentions of *hongsam* (86.4%), 3 mentions of *josam* (18.8%), 36 mentions of *posam* (90%), 1 mention of *insamcha* (2.9%), 2 mentions of *gasam* (14.3%), 4 mentions of *hosam* (33.3%), 25 mentions of *gongsam* (30.5%), 3 mentions of *yedansam* (20%), 11 mentions of *sinsam* (42.3%), 16 mentions of *dansam* (45.7%), and 2 mentions of *hwanpumsam* (100%). A new term that emerged in the 19th century is '*hwanpumsam*'. Regarding the *Hwanpoomsam*, in King *Soonjo*'s 23rd reign(1823) October 9th, 備局啓言 昨年東萊前府使李德鉉 以給倭單蔘事論報本司 觀其辭緣 則枚舉館守倭傳言以爲 換品蔘全不成樣 不爲與授者 今爲七年爲辭 (The *Beegook* Ministry of Defense stated that last year, a former envoy to *Dongnae* Province, Lee *Deokhyun*, reported about the matter of providing *dansam* to Japanese envoys. The report mentioned that the Japanese envoys claimed that the *hwanpoomsam* was of extremely poor quality and had not been handed over for seven years now). *Hwanpum* implies exchanging goods, suggesting that *hwanpumsam* could mean gifting *sinsam*, *dansam*, or *yedansam*, previously given as presents to Japanese envoys and emissaries. It is probable that those ginseng goods were traded for different items.

The Temporal Changes in the Occurrence of Ginseng during the Joseon Dynasty

Examining the overall occurrence frequency of various ginseng types throughout the 500-year historical flow of the *Joseon* Dynasty reveals the following sequence: 18th century with 1,642 occurrences (42.9%), 15th century with 952 occurrences (24.9%), 19th century with 610 occurrences (15.9%), 17th century with 526 occurrences (13.7%), and 16th century with 98 occurrences (2.6%). The generic term for ginseng, '*sam*' (蔘), appeared as follows in terms of frequency: 18th century with 1,225 occurrences (46.6%), 15th century with 502 occurrences (19.1%), 19th century with 425 occurrences (16.2%), 17th century with 393 occurrences (15.0%), and 16th century with 82 occurrences (3.1%), showing a similar trend pattern (Figure 2).

Generic ginseng types like *insam* and *sansam* appeared most frequently in the 15th century with 446 occurrences (56.4%), followed by the 18th century with 179 occurrences

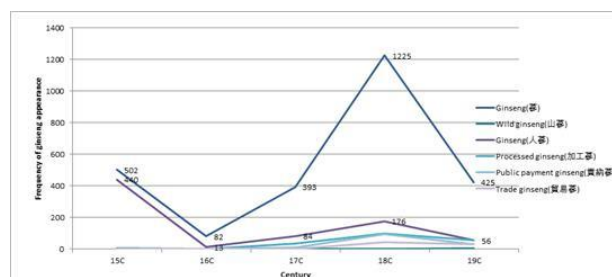


Figure 2. Changes in the frequency of ginseng appearance by century.

(22.6%), the 17th century with 87 occurrences (11.0%), the 19th century with 63 occurrences (8.0%), and the 16th century with 16 occurrences (2.0%). Processed ginseng types like hongsam and posam showed higher occurrences in the 18th century with 98 occurrences (50.8%), the 19th century with 59 occurrences (30.6%), and the 17th century with 36 occurrences (18.7%). Gongnapsam (tribute ginseng) appeared with 94 occurrences (67.6%) in the 18th century, 31 occurrences (22.3%) in the 19th century, 10 occurrences (7.2%) in the 17th century, and 4 occurrences (2.9%) in the 15th century, indicating the emergence of *gongnap* (tribute) system for ginseng after the *Daedong* Law in the 17th century as a significant issue in *Joseon* society. Trade ginseng appeared with 46 occurrences (59.0%) in the 18th century and 32 occurrences (41.0%) in the 19th century. After the 18th century, trade ginseng was predominantly acquired by private merchants, notably represented by merchants from *Gaeseong* and *Dongnae*.

Discussion

In this study, an analysis of the 'Joseonwangjosilo' through big data was conducted to investigate the perception of ginseng among the ruling class and its utilization during the *Joseon* era. The aim was to provide foundational data for the development of ginseng as a high-value cultural product. The target of this research, the *Joseonwangjosillok*, encompassed 1,968 volumes and 948 books, covering a total of 518 years. Web crawling was employed to collect data from the National Institute of Korean History website, followed by frequency analysis of significant terms.

The extraction of all words related to ginseng in the Annals revealed that the unique term for ginseng, 'sam' (蔘), accounted for 68.6% of the entire occurrences. The characters representing ginseng were listed as 'seok sam' (蔘) or 'gaji chisoteul sam' (蔘). Notably, based on the notation of ginseng as 'sim' in the '*Dongui Bogam*' and 'Jejung Sinpyeon,' it was inferred that 'sam' served as the *Hanja* expression of the unique term 'sim' for ginseng.⁵ Analyzing specific ginseng names showed that among the classifications of regular ginseng, 'insam' accounted for the highest frequency at 87.86%, indicating that 'insam' was the common name for ginseng. According to Moon (2011),⁶ during the *Joseon* era, ginseng primarily referred to naturally collected wild ginseng from mountainous regions. Within the processed ginseng classification, 'misam' showed the highest occurrence frequency at 23.32%. 'Misam' referred to roots that fell off during excavation or processing. The processing method for ginseng was naturally evolved, primarily involving drying for initial use.¹⁹ 'Gongnapsam' expressed as 'gongsam' showed the highest occurrence at 58.99%. It referred to ginseng offered as tribute or imposed as a local tribute.²⁰ Despite the reformation through the *Daedong* Law, where local tribute materials were replaced by monetary equivalents, ginseng retained high utility due to significant domestic and international demand. Regarding trade ginseng, 'dansam' accounted for 44.87% of the occurrences, indicating substantial societal interest in 'yedansam,' typically given to Japanese envoys for diplomatic purposes.

In order to assess the level of interest in ginseng across different reigns during the *Joseon* Dynasty, the recorded frequency of ginseng was adjusted based on the number of years of reign and the number of articles, producing an interest index for comparison of reigns. The ranking of reigns based on ginseng interest showed that King *Jeongjo* and *Yeongjo* in the 18th

century, King *Sunjo* in the 19th century, King *Sejong* in the 15th century, King *Sukjong* in the 17th century, and King *Gojong* in the 19th century demonstrated higher levels of interest in ginseng. The peak in ginseng records during King *Jeongjo*'s reign in the 18th century can be attributed to the decline of ginseng field workers due to the cultivation of 'gasam' (家蔘), leading to a decrease in naturally harvested wild ginseng.²⁰ This resulted in a severe economic downturn, marked by monopolies and increased prices by merchants. The '*Imwon Sibyukji*' (林園十六誌) authored by *Seo Yugoo* (徐有矩, 1764-1845) during the same period introduced cultivation methods for *gasam* based on Eastern agricultural and ginseng cultivation records.²¹ Moreover, insights from records during King *Jeongjo*'s reign in the 18th century indicated the activation of *gasam* cultivation due to the soaring ginseng prices. This led to a quantitative increase in ginseng supply and the development of new ginseng processing methods, including red ginseng. However, continuous debates surrounding its medicinal efficacy and the emergence of issues related to counterfeit ginseng like 'josam' indicated heightened societal interest in ginseng during this period. The second-highest interest in ginseng was observed during King *Yeongjo*'s reign. Beyond the political issues related to ginseng policy during his reign as king, King *Yeongjo* personally consumed ginseng as a tonic or remedy, indicating his heightened interest in ginseng for personal health reasons. *Yeongjo* was known to consume porridge in the early morning to warm his stomach and provide nutrition, unrelated to any illness.²² The third highest interest was observed during the early 19th century, under King *Sunjo*'s reign. In the 19th century, various ginseng-based health tonics such as '*insam-seokchangpocha*' and '*imsamyukilsan*' were consumed, mixed with other medicinal herbs. However, in the analytical study of royal court cuisines during the *Joseon* Dynasty, ginseng-based tonics were difficult to find,²³ necessitating further in-depth investigations in the future.

Analyzing the appearance status of ginseng by century and ginseng product types aimed at understanding the cultural characteristics of ginseng during the *Joseon* Dynasty revealed several insights. In the 15th century, ginseng distribution predominantly took the form of gifting among the ruling class, including the royal court and officials, rather than being traded in markets through merchants. It was restricted to the natural collection, and ginseng was perceived as an extremely luxurious and expensive item.

The 16th century, with the lowest frequency of ginseng appearance, was a unique period marked by the *Imjin* War and its aftermath, where ginseng trade occurred under the condition of military support for the Ming Dynasty.⁸ This was a time when Ming envoys entering *Joseon* were deeply involved in obtaining ginseng, resulting in widespread suffering among the majority of the populace due to ginseng trade. The appearance of *yanggak-sam* (goat horn ginseng) in the 17th century was noted. In the '*Jibong Yuseol*' (芝峯類設) authored by *Yi Su-gwang* (李睟光, 1613), it's mentioned: 'There are four things that exist in our country but not in China: *gyeongmyeonji*, *hwangmopil*, *hwamunseok*, and *yanggak-sam*.'²⁴ This indicates the emergence of *yanggak-sam* in Korea as a unique type of ginseng resembling goat horns. Another ginseng variant that surfaced in the 17th century was *pasam*. *Pasam* is a processed ginseng, which consists of multiple steamed ginsengs tied together. '*Goryeodogyung*' (高麗圖經) (Jo DW et al. ed. 2005)²⁵ recorded

that, 'Special ginsengs grow in Goryeo. There are two types: *saengsam*(raw) and *sooksam*(cooked). *Saengsam* is white in color and *huh*. Its taste is well-preserved when consumed with medicine. After summer, *sangsam*'s taste is comparable or worse than that of *sooksam* because *sangsam* is steamed heavily to prevent rotting. While the method of processing ginseng by steaming it had been used since the Goryeo Dynasty, the 17th-century advancements in manufacturing techniques led to the development of *pasam*, considered the precursor to red ginseng. The emergence rate of processed ginseng like *pasam* and *insam-cha* most likely increased during this period due to these manufacturing techniques.

With the arrival of *insam-cha* in the 17th century, ginseng consumption in the royal court shifted from medicinal treatment to a preventative herbal tonic. The rapid expansion of ginseng trade during this century was driven not only by the Ming and Qing dynasties' upper echelons but also by the growing demand for Korean ginseng among general aristocrats and the ruling class due to advancements in traditional medicine. This expansion caused challenges in ginseng supply due to indiscriminate harvesting and overuse, leading to the destruction of ginseng fields.² A new ginseng variety that emerged in the 17th century was '*sesam*'. As ginseng supply became increasingly uncertain, attempts were made to reform the basic ginseng supply system from physical contributions to monetary payments. Despite these efforts, *sesam*, a form of ginseng supplied as physical contributions, was maintained, particularly centered around the Kanggye region in Pyongan Province, the primary ginseng production area.⁶

Another ginseng type that surfaced in the 18th century was *hosam* (Chinese ginseng). During the transition from the Ming to Qing dynasty in the 17th century, Manchuria, being the origin of ginseng production, attempted to export ginseng to Joseon.⁸ As the ginseng prices in Joseon, an exporter of ginseng, soared, numerous cases emerged where ginseng from Manchuria was imported and disguised as Korean ginseng. This led to the emergence of ginseng names like *jinsam* (genuine ginseng) and *hosam* (Chinese ginseng). *Nasam* (ginseng from Gyeongsang Province) is frequently found in various documents, indicating 'ginseng from Gyeongsang Province' in its meaning. Regarding ginseng taxation in Gyeongsang Province, it was solely collected for the internal institutes, including the inner medical office, the office of traditional medicine, and the *Hwaominseo*. Following the implementation of the *Daedong* Law, genuine ginseng from Gyeongsang Province was replaced by the *Daedong* Tax. However, in the year 1700 (during King Sukjong's reign, the 26th year), it was proposed and reverted back to the form of actual ginseng payment. Particularly, among the ginseng from Gyeongsang Province, *nasam* was included.²⁰ Another newly introduced ginseng name in the 18th century was *hosam*(戶蔘). In the 33rd year of King Sukjong's reign (1708), when *sesam* was assessed as actual payments, the Kanggye Province levied taxes based on 'mouths' as units. Until the early 18th century, ginseng in Kanggye Province was referred to as 'mouth ginseng.' However, in the 10th year of King Yeongjo's reign (1734), the taxation unit for *sesam* was changed to 'households,' leading to its subsequent universal term as '*hosam*'.⁶ Moving towards the late 18th century, King Hojo made efforts to secure *yedansam*. *Yedansam* referred to ginseng presented as a tribute to the annual envoy from Japan. The trade with Japan, which had been interrupted by the Imjin War, resumed in the first year of King Gwanghae's reign (1609) following a treaty, requiring approximately 70 *geun* of ginseng annually for these envoys. To

meet this demand, a *donsam* system was established in the 35th year of King Sukjong's reign (1709).⁸

When the *Daedong* Law was enacted in the 17th century, ginseng was procured by *samgongin*(ginseng collectors). However, due to active external smuggling by ginseng merchants, domestic ginseng prices surged. As a result, it became difficult for ginseng collectors to purchase ginseng with the *gongga* (tribute price) received from the government. Furthermore, as the locally produced ginseng continued to decrease, the ginseng supply system encountered problems.

To overcome this, in 1707 (the 33rd year of King Sukjong's reign), the Kanggye Province allocated 30 *geun* of *sesam*, and in 1754 (the 30th year of King Yeongjo's reign), 35 *geun* of *yemusam*, and also regularly received *shinsam* involved in communication missions. Under the framework of the gold ginseng policy, the Kanggye Province received allocations of *sesam* and *yemusam*. As the *gongsam* ginseng in Kanggye Province was procured for the purpose of securing ginseng in Hojo, the Hojo managed the *gongsam* ginseng system. *Gongsam* ginseng delivered to Hojo from Kanggye Province was distributed according to different categories: *sesam* was allocated to the central palace, *yemusam* to Dongnae Division for the annual envoys, and *shinsam* to the *tongshinsa*. Ginseng distribution and policy were both centralized around Hojo. Local administrations such as Pyeongan Province, Ganggye Province, and Dongnae Division strictly regulated ginseng merchants to prevent the export of ginseng abroad.⁶

In the 19th century, the prominent ginseng type with a noticeable appearance frequency was *hongsam*(red ginseng), constituting 86.4%. *Hongsam* was artificially cultivated ginseng, dried and produced by the capital investment of *Gaeseong* merchants. It became a crucial product in the international trade between the three countries—Joseon, Qing, and Japan, during the 19th century.²⁶

Through an overarching examination of the temporal changes in ginseng appearances during the Joseon era, common ginseng types like *insam* (ginseng), *sansam* (mountain ginseng), and others exhibited the highest occurrence frequency in the 15th century. During this period, the medicinal effects and quality of ginseng from Korean mountains were recognized since the Goryeo era, earning acknowledgment even in the Ming Dynasty, where the imperial demand for high-quality ginseng solely depended on Korea's *Jinheon* ginseng. Japan, which lacked indigenous ginseng, long acknowledged ginseng imported from Korea as a valuable medicine among its royal and noble elite. Essentially, in the 15th century, Korea leveraged the diplomatic relations by adeptly utilizing ceremonial items in response to the ginseng demands from the royal families and aristocratic societies of China and Japan.

The emergence frequency of processed ginseng types such as *hongsam*, *posam*, *gongnapsam*, and trade ginseng was highest in the 18th century. This coincided with the increasing capability of ginseng cultivation in households post-18th century, leading to a significant quantitative supply. This background facilitated the development of ginseng processing techniques like the production of *hongsam*. The mass production of ginseng and *hongsam* involved private merchants such as *Gaeseong* and *Dongnae* merchants. Initially, these merchants dominated the external export of natural ginseng. Later in the Joseon period, following the large-scale cultivation of ginseng, they received commissions from the government, processed ginseng into

hongsam, and supplied it through designated distribution centers, contributing significantly to the development of ginseng culture during the Joseon era.²⁷

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CONFLICT OF INTEREST

The authors have no conflicting financial interests.

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