

Tubers in a Grain Culture:

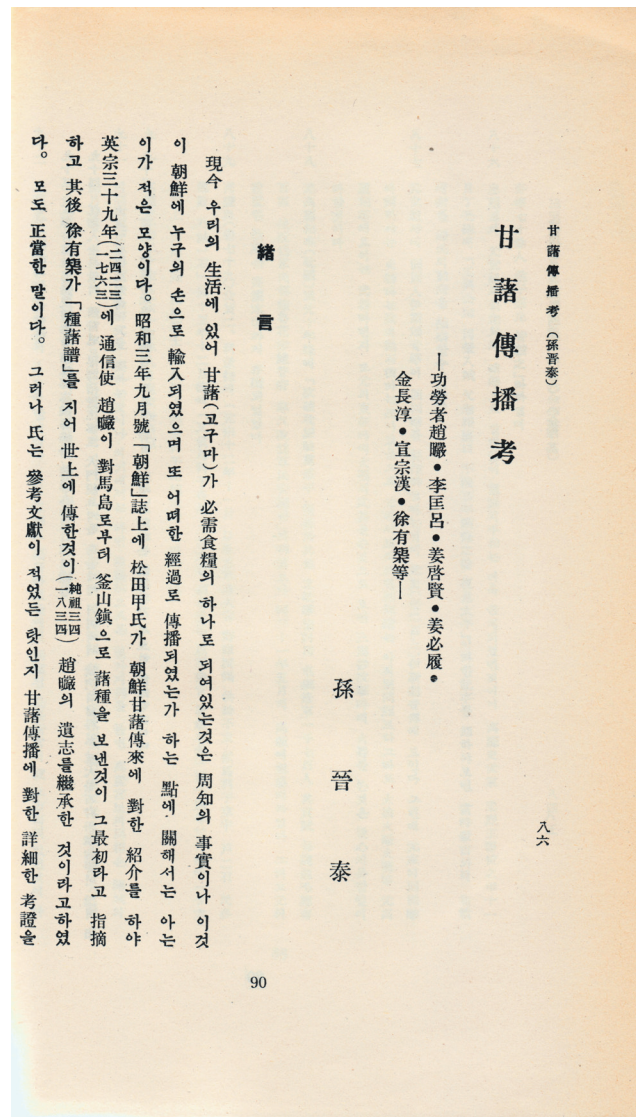
THE INTRODUCTION OF SWEET AND WHITE POTATOES TO CHŎSON KOREA AND ITS CULTURAL IMPLICATIONS¹

INTRODUCTION

In the early years of the second half of the eighteenth century, a number of Korean scholars planned an agricultural revolution. They intended to solve, once and for all, the problem of feeding Korea by importing and cultivating a new food crop: the sweet potato.² They were optimistic about the potential of this plant, and went to great lengths to import it. The sweet potato had already changed Chinese and Japanese agriculture, and was now to be tried out in Korea.

This article deals with the history of food in late Chosŏn Korea – specifically with the history of the sweet potato (*Ipomoea batatas*) and the potato (*Solanum tuberosum*), which will be called the ‘white potato’ in order to differentiate between the two species. The two ‘potatoes’ are not botanically related, but the semantic similarity suggested by their names in English is also found in Korean and, more importantly, in Classical Chinese – to the extent that we cannot always be sure which tuber a text is talking about. Also, both the roles generally attributed to the two tubers in East Asian agricultural literature and their taxonomic proximity to each other suggest they should be examined together, as they shall be here.³

This article is intended to be understood as an example of how we can approach and extract meaning from material culture (in this case, food culture) in the history of Chosŏn Korea. It is also my intention to shed some light on the structures in which (material) culture, economics, and systems of thought are interwoven to form the fabric of what we call ‘society’. Furthermore, the use



The first page of Son Chint'ae's pioneering study

1 This work was supported by the Academy of Korean Studies of the Republic of Korea in the years 2009/2010 (AKS-2009-MA-1001).
 2 The word ‘potato’ is derived from a word in a South American language, which was rendered as ‘batata’. It was first used for the sweet potato and only later came to refer to the white potato. See J.G. Hawkes, “History of the Potato”, in *The Potato Crop*, ed. by P.M. Harris (London: Chapman & Hall, 1978), p. 5.
 3 However, examining them together – as two subjects in one article – does not mean that they were used in almost the same way, as implied by Michael Pettit, *Korean Cuisine. An Illustrated History* (London: Reaktion Books, 2008), p. 44.

of source material from agronomic manuals (*nongsŏ* 農書) will, I hope, show the usefulness of these manuals as sources for social and even an intellectual history. I am no specialist in cultural theory, or in agronomic history. My approach is based on the picture that emerges from the sources; therefore, some of those sources are quoted at some length in translation. I hope that specialists in the fields of food history, cultural theory and agronomic history will find the preliminary remarks in this article useful and find that they broaden the perspective. My reason for writing this article, despite the daunting nature of the task, is the absence of publications on such topics – specifically on the sweet potato – in Western languages. I hope that more interest in the connections between agronomic and economic history, material and general culture, and intellectual history might be generated in Korean studies.

The importance of the history of food is clear from the frequent famines, sometimes resulting in mass starvation, which were a common problem in later Chosŏn and gave rise to annual food shortages in the spring, before the new grain crops could be harvested. These were so common we might even assume that people were accustomed to them. The lower strata of the populace seldom had enough to eat.⁴ From the late seventeenth century onwards, cultivation of the sweet potato played an important role in the relief of famine crises in the southern Chinese region of Fujian, where it was introduced by Chinese seamen in 1593 or 1594.⁵ The sweet potato was also introduced to Japan in the early seventeenth century, and was used very successfully to fight famine there too.⁶ Sweet potato cultivation was remarkably successful in the region of Satsuma in southern Japan, especially in the early eighteenth century.⁷

Another historical process more likely to be known to Western readers is the spread of the potato in Europe and the near total shift of grain-based to potato-based economies, the most famous example being the introduction of the potato to nineteenth-century Ireland,

with catastrophic consequences.⁸ While it is not possible to discuss the spread of the tubers in more depth here, all in all, the two ‘potatoes’ seem to have been of great use in warding off famine following their dissemination around the world. But tubers – or the sweet potato, at least – seem to have been less effective in Korea. This article also attempts to explain why the sweet potato was less successful there and how that came to be so.

While there is a wealth of scholarly publications on the philosophical, cosmological, ideological and political histories of Korea, the country’s agricultural and economic history and the history of its material culture have received very little attention in the West, even though they would obviously be relevant to understanding an agrarian society like Chosŏn. The history of tubers in Korea has, to my knowledge, not been dealt with in Western languages, but the subject has been studied by Korean and Japanese scholars. Modern scholarly interest in the history of the sweet potato in Korea starts with a study by the Japanese linguist Ogura Shinpei 小倉進平, which was included in his study on Korean dialects, published in 1924 in Keijō 京城 (now Seoul).⁹ Ogura Shinpei’s study does not appear to have had a great impact on his contemporaries and a later study by the Korean historian Son Chint’ae 孫晉泰 (1900-?),¹⁰ published in 1941, does not mention it. Son Chint’ae’s publication was followed by a slow but steady succession of studies on the sweet potato in Korea, which recently culminated in a wide-ranging work on Cho Ŏm 趙職 (1719-1777) and the sweet potato, published in 2004, which can be said to sum up Korean scholarship on the history of the tuber.¹¹

Following Hideyoshi’s invasion of Korea (1592-1598), the country’s economic and demographic foundations – including its agriculture – had to be rebuilt. In such a situation organizational and social changes were likely to occur. But Korean agriculture also changed because of the new crops that were gradually introduced to the country. The most noteworthy among them were corn (maize), tobacco, tomato, red pepper (chilli pepper), pumpkins,

4 Kang Inhŭi 姜仁姬, *Han’guk siksaenghwal sa* 韓國食生活史, 2nd edn. (Seoul: Samyŏngsa 三英社, 1989), p. 315.

5 Quan Hansheng 全漢昇, *Ming Qing jingjishi yanjiu* 明清經濟史研究 (Taipei 臺北: Lianjing chuban shiye gongsi 聯經出版事業公司, 1987), p. 57. Gong Zongjian 公宗鑑, “Dui ganshu de zairenshi 對甘薯的再認識”, *Nongye kaogu* 農業考古 1 (1991), 205-218 (p. 208).

6 Patricia O’Brien, “Sweet Potatoes and Yams”, in *The Cambridge World History of Food*, ed. by Kenneth F. Kiple and Kriemhild Coneè Ornelas, 2 vols (Cambridge: Cambridge University Press, 2000), I, 207-218 (p. 209).

7 Kim Chaesŭng 金在勝, “Cho Ŏm-ŭi koguma chŏnp’a-wa chaebaebŏp yŏng’guja 趙職의 고구마 전파와 재배법 연구자”, in *Cho Ŏm yŏn’gu nonch’ong* 趙職研究論叢, ed. by O Yŏnggyo 오영교 (Wŏnju 原州: Wŏnju-si 原州市, 2004), 39-94, (p. 48).

8 James Walvin, *Fruits of Empire: Exotic Produce and British Taste 1660-1800* (London: McMillan, 1997), p. 104.

9 Ogura Shinpei 小倉進平, *Nanbu Chŏsen-no hŏgen* 南部朝鮮の方言 (Keijō 京城 [Seoul]: Chŏsenshi gakukai 朝鮮史学会, 1924).

10 Son Chint’ae 孫晉泰, “*Kamjŏ chŏnp’a ko* 甘薯傳播考”, *Chindan hakpo* 震檀學報 13 (1941), 86-109.

11 *Cho Ŏm yŏn’gu nonch’ong* 趙職研究論叢, ed. by O Yŏnggyo 오영교 (Wŏnju 原州: Wŏnju-si 原州市, 2004).

and, finally, the sweet and white potatoes. It is noteworthy that among these plants only maize and the two ‘potatoes’ are potential staples, so their role can be expected to differ from that of the other crops. Another important agricultural change in the later Chosŏn period was the trend towards paddy field cultivation, encouraged by preferential treatment in taxation. As a consequence, paddy field agriculture could (through higher average yields) produce more grain with lower taxation, which resulted in a higher overall grain productivity. This rise in grain productivity makes it even harder to know what impact other (new) crops had on the economy, as it is possible that increased grain production was responsible for most or all of the changes in food security.

The food situation for the general populace in eighteenth-century Korea was tense, as the country suffered from yearly spring famines, which resulted from the supplies of the last year being used up before the new barley could be harvested.¹² Also, the climate at that time was probably influenced by the phenomenon known as the ‘Little Ice Age’, a general fall in temperature which worsened conditions for agriculture, especially for crops dependent on long periods of mild weather. According to data compiled by the historian Kim Yŏnok 金蓮玉, there was a period from around 1550 to 1800 in which extreme climatic phenomena occurred with great frequency.¹³ The occurrence of such phenomena must have worsened the agronomic situation and would have contributed to a sense of crisis in agriculture that motivated a search for ways to improve the status quo of crop production. In 1763, the very year Cho Ōm is believed to have brought sweet potatoes to Korea, possibly for the first time ever, the southern part of Korea suffered from a famine that affected nearly half a million people.¹⁴ The success of sweet potato cultivation in China and Japan became known in Korea and as the precarious food situation of Korea’s general populace was plain to see, it is not surprising that scholars began to consider the potential this new crop might have in the fight against famine and the efforts at stabilizing the country’s food situation.

INTRODUCTION OF THE SWEET POTATO TO KOREA

There is not enough evidence to ascertain when the sweet potato first became known in Korea and when it was first discussed. The name for the sweet potato in Classical Chinese, *kamjŏ* 甘藷 (in Chinese it is pronounced *ganzhu*), came to Korea through agronomic manuals, together with information about the plant itself. The most important among those manuals are the *Nongzheng quanshu* 農政全書 and the *Ganzhu shu* 甘藷疏, both by the Chinese scholar Xu Guangqi 徐光啟 (1562-1633).¹⁵ Xu Guangqi also spread the idea that food shortages should be offset by the extension of sweet potato cultivation.¹⁶ While it is very likely that knowledge of the sweet potato first came to Korea through Chinese or Japanese books, it is difficult to say when this occurred, as it is not possible to date the introduction of such works to the country. To make matters worse, the spread of the information contained in (but not confined to) these books is nearly impossible to trace. It would involve the highly complex philological problem of mutual borrowing and the incorporation of texts, possibly with amendments or omissions, into newly compiled manuals, a topic that would itself require a book-length study. But the real problem lies in the fact that the publication of books tells us little about the spread of the practice of tuber cultivation – unless explicitly mentioned, which is rare. After all, the men who wrote these books did not tend to be practical farmers.

We can assume that the *Kamjŏ po* 甘藷譜, of unknown origin, is probably the earliest text on the sweet potato written and circulated in Korea. The text is also called *Kang-ssi kamjŏ po* 姜氏甘藷譜 (*Kang’s Sweet Potato Manual*), as it is thought by some scholars to have been written by Kang P’illi 姜必履 (1713-1767).¹⁷ The *Kamjŏ po* was followed by a wealth of publications on the cultivation of the sweet potato, many of which, fortunately, are extant. The premodern literature on the sweet potato consists mostly of manuals (*nongsŏ*) and, as would be expected, has a distinctly practical orientation. While most manuals also include a few remarks on the history of the sweet potato, the most important works on this subject are those by Yi Kyugyŏng 李圭景 (1788-?), which are not themselves

12 Yŏm Chŏngsŏp 嚴正植, “Chosŏn sidae kuhwang chŏngch’aek-kwa kuhwang changmul-losŏ-ŭi koguma 조선시대 구황정책과 구황작물로서의 고구마”, in *Cho Ōm yŏn’gu nonch’ong*, ed. by O Yŏnggyo, 95-151, (p. 126).

13 Table nr. 7 in Kim Yŏnok 金蓮玉, “Han’guk-ŭi sobinggi kihu 韓國의 小水期 氣候”, *Chirihak-kwa chiri kyoyuk* 地理學과 地理教育 14 (1984), 1-16, (p. 7).

14 Kim Chaesŭng 金在勝, “Koguma-ŭi Chosŏn chŏllae 고구마의 朝鮮 傳來,” *Tongsŏ sahak* 東西史學 8 (2001), 97-117, (p. 105).

15 Kim Chaesŭng, “Cho Ōm-ŭi koguma chŏnp’a”, p. 63.

16 Francesca Bray, *Science and civilisation in China. Vol. 6: Biology and biological technology; Part 2: Agriculture*, (Cambridge: Cambridge University Press, 1984), p. 67.

17 Yŏm Chŏngsŏp, “Chosŏn sidae kuhwang chŏngch’aek”, p. 134.

manuals in the strictest sense. Although Yi Kyugyōng's works contain information on the cultivation of the plant, their emphasis is on historical questions. Translations of parts of these works will be provided later in this article.

However, the account generally believed to describe the first introduction of the sweet potato to Korea is not an agronomic manual, but a passage from the *Haesa ilgi* 海槎日記, the extant travelogue of Cho Ōm (1719-1777), who took part in the embassy to Japan in 1763. Cho Ōm is also thought to have later compiled a short manual on sweet potato cultivation, probably based on the techniques he was introduced to in Japan, but I am unaware of any evidence for this manual. His account is as follows¹⁸:

On the island there is a plant whose leaves and roots are edible. It is named 'sweet potato'. Some call it hyojama 孝子麻¹⁹ and in Japanese pronunciation it sounds like 'kogwiwima' 古貴為麻.²⁰ [...] It can be said that it is a good resource for the prevention of famines.

One hears about these fruits that they came from the area around Nanjing 南京²¹ and then came to Japan. On the islands of the Japanese land mass, they are especially widespread and Tsushima 對馬 is the place where sweet potato cultivation flourishes. [...]

Last year, when I came to the harbour of Sasuna 佐須奈 for the first time, I saw the sweet potatoes and after some effort I was given a few tu 斗. I took them with me, brought them to Pusan 釜山 and let them²² take the seeds. This time, I have again made some effort and got sweet potatoes on my way back. I plan to give those sweet potato seeds to the officials in Naeju 萊州.²³ Among the other members of the embassy, there are also some who took sweet potatoes with them. If the seeds should all be able to sprout, and if we could then spread it broadly in our country and so make it [...] helpful as in the case of cotton²⁴ – would that not be of great help for the people of our eastern country?²⁵

So upon having heard about the sweet potato and how its cultivation benefitted Japan, Cho Ōm decided to search for it and bring seeds to Korea. He then gave those seeds away and they were planted in the region around Pusan, which is therefore the earliest confirmed place of sweet potato cultivation in Korea. However, Cho Ōm envisioned much wider use of the sweet potato in Korea, an idea that is then often found with later writers:

If the sweet potatoes, which are to be planted in Naeju, should be a good and rich success, then one should also bring the sweet potato to Cheju 濟州 and the other islands and cultivate it there. This would be fitting indeed! I have heard that the soil and the environment in Cheju are mostly similar to those on Tsushima. If the sweet potato should finally yield a luxuriant success, one could entirely do away with the dependence of the people of Cheju on the relief service and the grain transports by sea from the stores in Chōlla province! But it is unclear whether the region of Cheju is suitable for the cultivation of the sweet potato. The yields of the different soils are all different. If one just relocates plants at will, how can one foretell the results?²⁶

Even though he closes his account with a warning, the overall impression is that Cho Ōm believed the sweet potato would help overcome the problem of food insecurity in the south of Korea. Cho Ōm's account might indeed have helped in setting the scene for the pro-sweet potato literature that was to follow. However, not much attention was paid to his cautious remark about the difference between Japanese and Korean climate and soils. Most of the literature assumes that what worked in Japan and China could, and indeed would, work in Korea too. In the few decades after the introduction of the sweet potato, its cultivation was encouraged in a number of works, among which one of the best known is the *Pukhagūi* 北

¹⁸ All translations are mine, unless specified otherwise.

¹⁹ *Hyojama* literally translates as "hemp of the filial son."

²⁰ Semantically, this makes no sense, so it is presumably only used to transliterate the sound. 'Kogwiwima' is the modern Korean reading of the characters and thus differs from the Korean reading of the seventeenth century. The connection to the modern Korean *koguma* is quite visible in this form.

²¹ Nanjing was the capital of the Chinese Ming 明 dynasty, still in use after the fall of the dynasty in 1644. It is possible that Cho Ōm expresses a degree of Ming-loyalism through this usage.

²² It is not clear who 'them' refers to. It is likely that Cho Ōm gave the seeds to local administrative officials with whom he had contact in Pusan.

²³ This is most likely another name for Tongnae 東萊, the area around Pusan.

²⁴ Cho Ōm refers to the benefits that the Korean economy gained from the introduction of cotton to the country from Yuan China in the mid fourteenth century. At the end of the fourteenth century, Chosŏn's cotton industry was well known. See Yi Ch'unnyōng 李春寧, *Yijo nong'ōp kisul sa* 李朝農業技術史, (Seoul: Han'guk yŏn'guhoe 韓國研究會, 1964), p. 44.

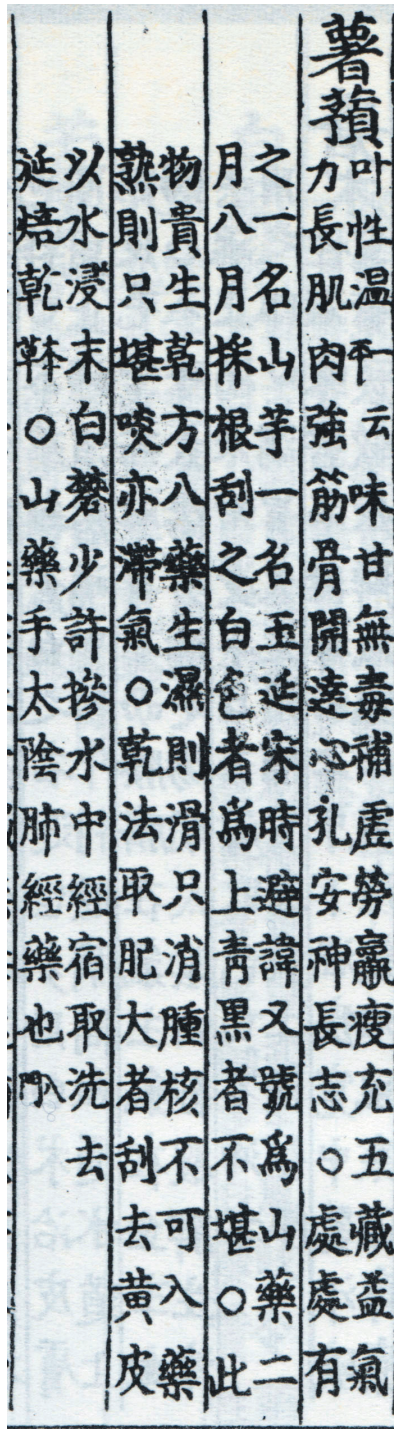
²⁵ Cho Ōm 趙職, *Haesa il'gi* 海槎日記, kwŏn 5, month 6, day 18.

²⁶ *Ibid.*

學議 manifesto by Pak Chega 朴齊家 (published 1790). Pak Chega was impressed by the sweet potato cultivation in Qing China and in the chapter titled “Planting Sweet Potatoes” he encourages emulation of the Chinese example in Korea:

The sweet potato is extraordinary among the measures against famine. It would be fitting to order the officials in charge of the military settlements (tunjŏn'gwan 屯田官) to [...] plant sweet potatoes. Also they can be planted in great quantities in locations such as Chŏn'gyo 箭串²⁷ and on the yulto 栗島.²⁸ Furthermore, the people should be brought to plant sweet potatoes themselves. Then it will not be necessary to worry this year. One simply lets the sweet potatoes sprout and watches out for dampness and frost.²⁹

It seems Pak Chega might have misunderstood what he saw in China. At that time the sweet potato was not well-adapted for plantation in the rough climate of northern China and Manchuria – it was modern cultivars that made it feasible to grow sweet potatoes in the north. It is possible that Pak Chega actually saw white potatoes and was for some reason unable to differentiate between those and sweet potatoes. Whatever he saw, his appeal is very clear: the official policy of Chosŏn Korea should be more supportive towards cultivation



Hŏ Jun's famous Chosŏn medical dictionary, the Tongui pogam 東醫寶鑑 (The Precious Mirror of Eastern Medicine, 1611)

of the tuber crop, which could then be used as a staple to combat famine. Pak Chega does not relate his appeal to the state of tuber cultivation in Korea at the time, but it is obvious that he thought the status quo in this regard insufficient and believed it to compare unfavourably with what he saw in China.

POSSIBILITY OF AN EARLIER INTRODUCTION

While it has been claimed that Cho Ōm was the first to introduce the sweet potato to Korea and leave a record of its introduction, there are reasons to believe that it was actually brought to Korea earlier. The vernacular word for the sweet potato, *koguma*, is mentioned by Cho Ōm and is clearly described as the Japanese word for ‘sweet potato’, but Cho Ōm – and other later writers – exclusively use the term *kamjŏ* in their studies. It would therefore be reasonable to expect the spread of the use of the word *kamjŏ*, or variations thereof, into the vernacular.³⁰ The Japanese term for the sweet potato is *karaimo* (sweet taro) or *satsuma imo* (taro from Satsuma) and *koguma* is most likely derived from a word from the Tsushima dialect where the sweet potato is still called *kōkoimo*, *kōkomo*, *kōkomomo* or *kōkōimo* until today.³¹ This form must also be the form that Cho Ōm used in his report.³² Most Korean scholars state that the name *koguma* derived from the word imported by Cho Ōm.³³ But

27 These characters could also be read “chŏnch’ŏn”. Most likely, this is a reference to the area around the Chŏn’gyo bridge in the capital (today’s Seoul).

28 These could be river islands on which chestnuts were cultivated. The use of chestnuts was widespread in Korea, especially in the north, a fact which is also noted in Yi Chunghwan (李重煥, 1690-1752?)’s *T’aengniji* 擇里志. *T’aengniji/Pukhagüi* 擇里志 – 北學議, ed. and trans. by No Toyang 盧道陽 and Yi Sŏkho 李錫浩 (Seoul: Taeyang sŏjŏk 大洋書籍, 1982), p. 194.

29 Pak Chega 朴齊家, “Pukhagüi 北學議,” in *Chŏngyujip* 貞莢集, ed. by Kuksa p’yŏnch’an wiwŏnhoe 國史編纂委員會, (Seoul: T’amgudang 探求堂, 1971), p. 449.

30 This seems to have been the case later, when the word *kamja* was coined for the white potato.

31 *Nihon kokugo dai jiten* 日本国語大辞典, 2nd ed. (Tokio: Shōgakukan 小学館, 1972), vol. 5, p. 265.

32 See Ogura Shinpei, *Nanbu Chōsen-no hōgen*, p. 203 and Son Chint’ae, “Kamjŏ chŏnp’a ko”, p. 107. The form Cho Ōm uses is 孝子麻, which he states is read as ‘kogwiwima’ 古貴為麻. It is not easy to explain why the character 麻 appears instead of 芋.

it is also possible that the sweet potato reached Korea much earlier from Tsushima and that its name entered Korean from the language of Tsushima then. Due to its clandestine nature, it is impossible to date such an introduction, but it could have been well before the official introduction by Cho Ŏm in 1763.³⁴ Even if such an introduction was at a later date, it could still have been independent from Cho Ŏm and the 1763 embassy.

THE OTHER TUBER – INTRODUCTION OF THE WHITE POTATO TO KOREA

Until now, I have focused on the sweet potato, partly because there is less material on the white potato, and also because the white potato was introduced to Korea a few decades later. While some evidence suggests that the sweet potato was introduced to Korea through the systematic efforts of a learned elite, this is not the case with the white potato, which found its way to Korea via an unknown route, as indicated in the following account by Yi Kyugyōng in his *On the Potato*.

The white potato (pukchō 北薯) has come to our eastern country later [than the sweet potato] and only a dozen years³⁵ have passed since then. [...] As for the white potato, it came over the Tumen 豆滿 River and across the northern border. This was roughly between the years kapsin 甲申³⁶ and ūr'yu 乙酉³⁷ of the reign of our King Sunjo 純祖³⁸. [...] Since the advent of the potato, not even twelve years³⁹ have passed. Its seeds have been spread to all places and everyone profits from it. (In the cities of Yangju 楊州, Wōnju 原州 and Ch'ōrwōn 鐵原 one plants the white potato in bad years and thus escapes starvation. In the area of the prefecture of Kyōngsōng 鏡城 on the northern border, about 20 miles from the relais station of Susōng 輸城,⁴⁰ there is a vil-

lage in the mountain valley which has 50 or 60 families. They live only on the white potatoes they plant, which is their staple food for the whole of the year.) [...] If, as a consequence, cultivation of the white potato [is] spread, it will, like taro and hoch'ōn 胡擲⁴¹ only be planted on the rich soil in the pleasure gardens of the rich. How could the poor hill-dwelling people [make] any use of this?! I only fear that, when the potato [flourishes], the sweet potato [will] then decline. Would that not be a pity for the successes that wise men worked so hard for in the past?⁴²

According to Yi Kyugyōng, the white potato was introduced to Korea in 1824 or 1825 via the northern border and then spread rapidly in the north, becoming an important staple crop. Yi Kyugyōng believed the success of the white potato might even endanger sweet potato cultivation. We can therefore assume that in the mid nineteenth century the impact of the sweet potato was still not overwhelming. Yi Kyugyōng's reason for believing the white potato might pose a risk to sweet potato cultivation was that it did what the sweet potato was supposed to do: reduce the risk of starvation in bad harvest years. And indeed the white potato had considerable, if poorly documented, success in the north. It quickly became a staple for mountain villages in the northern part of Korea.⁴³ At the beginning of the twentieth century, the widespread use of the white potato as a staple food in the northern part of Korea compared favourably with the unsatisfying state of sweet potato cultivation.⁴⁴

In a passage from the above text that has been omitted here, Yi Kyugyōng tries to establish a relation between the dates on which the sweet and the white potato were introduced to Korea, which he states are 60 years apart – the length of one calendar cycle. He interprets this coin-

33 Kim Chaesūng, "Cho Ŏm-ūi koguma chōnp'a", p. 64. O Sugyōng 吳壽京, "Chosōn hugi iyong husaengag-ūi chōn'gae-wa 'kamjōpo'-ūi p'yōnch'an 朝鮮後期刊用厚生學의 展開와 '甘藷譜'의 篇纂", *Andong munhwa* 安東文化 16 (1995), 5-23, (p. 5). Yōm Chōngsōp, "Chosōn sidae kuhwang chōngch'aek", p. 136.

34 This point is also made implicitly by Michael Pettid, *Korean Cuisine*, p. 41.

35 A *ki* 紀, meaning the cycle of twelve years used in the calendar.

36 This refers to 1824.

37 This refers to 1825.

38 King Sunjo reigned from 1800 until 1834.

39 Again, *ki* 紀 is used to describe this time-span.

40 Kyōngsōng and Susōng still exist today. They are near the city of Ch'ōngjin 清津 on the east coast of present-day North Hamgyōng Province (咸鏡北道), North Korea.

41 It is not clear what this plant is.

42 Yi Kyugyōng 李圭景, *Oju yōnmun changjōn san'go* 五洲衍文長箋散稿, ed. by Kojōn kanhaenghoe 古典刊行會 (Seoul: Tongguk munhwasa 東國文化社, 1959), pp. 65-66.

43 Kang Inhūi, *Han'guk siksaenghwal sa*, p. 300.

44 Chōsen sōtokufu nōji shikenjō 朝鮮總督府農事試驗場 (ed.), *Chōsen sōtokufu nōji shikenjō nijūgoshūnen kinenshi* 朝鮮總督府農事試驗場二十五周年, (Keijō 京城 [Seoul]: Chōsen nōkai 朝鮮農會, 1931), vol. 1, 123 and 139.

cidence as having some metaphysical meaning, but does not go into the details of its implications.

Yi Kyugyōng then gives a more detailed account of the introduction of the white potato, which is worth quoting at length:

Between the years kapsin and ūr'yu in the reign of King Sunjo,⁴⁵ the white potato first came from the region north of the border. Someone thought that the physiognomist Kim⁴⁶ from [...] the Myōngch'ōn 明川 district⁴⁷ had travelled to the capital and spread the white potato there. As the white potato appeared for the first time, one said that this thing comes from the region on the northern border and has been replanted over here. It is such that in the beginning this particular man⁴⁸ crossed our border illegally to gather ginseng.⁴⁹ To this end, he built himself a hut in a mountain valley and planted potatoes to eat. In the place where he had dwelled he left a small field with a plant with leaves resembling turnip mustard [...] They [Those who found his fields] planted it on our soil and it grew well and proliferated. When I asked a merchant in Kaesōng 開城⁵⁰ about it, he said he thought it was a sweet potato from the north and that it was used as a staple food.

Yi Hyōngjae 李亨在, whose style is Musan 茂山, was the leader⁵¹ in Musan 茂山.⁵² He heard about the white potato and searched for it among the people, but he got no answer from them. He asked why. They told him the following story: Since the white potato had come from over the stream, one inch of soil had become as valuable as gold. The governor of the province did not like that and he forbade its cultivation and its spread. But the people found it very useful for their nutrition, so they did not abide by the ban and secretly planted white potatoes. This was why they did not dare to give him potatoes.⁵³

According to this account, which Yi Kyugyōng believes to be true, the white potato was introduced from the north by an illegal ginseng gatherer. After the ginseng poacher was chased away, the locals took over his potato field and the cultivation of potatoes spread rapidly. What is missing in this account is an explanation of how the locals came to know about the techniques of potato cultivation. It is likely that there would have been some form of contact between the locals and the ginseng gatherers. This contact would also help to explain the heavy-handed reaction of the local administration, who would not have allowed such cordial relations. It should be noted here that most of the supporters of tuber cultivation, and indeed most agricultural reformists, were scholars associated with opposition to the elites.⁵⁴

The time interval given by Yi Kyugyōng seems plausible. It is also quite possible that the white potato came to Korea via similar routes even earlier. From at least the beginning of the eighteenth century onwards, there was a more or less steady influx of immigrants from the border region with Qing China into Chosōn territory.⁵⁵ But we know that knowledge about the sweet potato had spread before the introduction of the white potato. The term for the white potato must have entered the Korean vocabulary later than the word for sweet potato, as its name, *kamja*, is clearly derived from *kamjō*, the word for sweet potato. Therefore the white potato was spread at a time when the sweet potato was already known as *kamjō*.⁵⁶

Yi Kyugyōng also gives another account of the introduction of the white potato, which he subsequently rejects:

There is also a misleading report that in the year imjin 壬辰⁵⁷ an English ship landed on the island of Mokkoda 牧古大 in the region of Hongju 洪州.⁵⁸ The barbarians who had landed then planted the white potato plant on the island of Pulmo 不毛 and so it came to our

45 This refers to the years 1824 and 1825 respectively.

46 In the text it only says "Kim mo" 金某. No personal name is given.

47 This district is located circa 50 km south of the city of Ch'ōngjin 清津, on the east coast of present-day North Hamgyōng Province (咸鏡北道), North Korea.

48 It is not clear who this man is. It is probably not the Kim mentioned above, as Kim is stated to have been Korean, while this ginseng poacher was not.

49 It is likely that this man was one of the Chinese poachers who illegally crossed the border to collect ginseng.

50 In the text it says "Kaesi" 開市, which is "the city of Kaesōng".

51 In the text it says "choi" 倅. This is not an official title and probably refers to the assistant prefect (*t'ongp'an* 通判). See Charles O. Hucker, *A Dictionary of Official Titles in Imperial China*, (Stanford: Stanford University Press, 1985), p. 528 and p. 555.

52 Musan is a region in the north-eastern part of present-day North Korea.

53 Yi Kyugyōng, *Oju yōnmun changjōn san'go*, pp. 65-66.

54 O Sugyōng, "Chosōn hugi iyong husaengak", pp. 6-7.

55 Ch'oe Soja 崔所者, *Ch'ōng-gwa Chosōn: Kūnse tong asia-ūi sangho insik* 清과 朝鮮: 근세 동아시아의 상호인식, (Seoul: Hyeon Hyeon, 2005), pp. 25-126.

56 Kim Chaesūng, "Cho Ōm-ūi koguma chōnp'a", p. 69.

57 This refers to the year 1832.

58 Hongju is a region in present-day South Ch'ungch'ōng Province (忠清南道), South Korea.

*eastern country. This is a misleading speculation; how could it suffice to make us believe it?*⁵⁹

This last statement by Yi Kyugyŏng, however, should be reconsidered. The German missionary Karl Gützlaff (1803-1851) claimed to have introduced the white potato to Korea by 1832 and left the following record for 30 July 1832:

*„This afternoon we went ashore to plant potatoes, giving them [the Koreans] the directions necessary to follow for insuring success. Even this act of benevolence they at first strenuously opposed; for it was against the laws of the country to introduce any foreign vegetable. We cared very little about their objections, but expatiated upon the benefits which might arise from such innovation, till they silently yielded*⁶⁰

The event of an English ship landing on the coast is also mentioned in the *Sillok* 實錄.⁶¹ So the event Yi Kyugyŏng dismisses so sharply really did occur: Gützlaff was in the very region Yi Kyugyŏng refers to and did try to disseminate potatoes. It is, however, quite possible that Yi Kyugyŏng is right in believing these events had little direct impact.

It is interesting that Gützlaff explains the Koreans' lack of appreciation for his potatoes by referring to one of their laws as, to my knowledge, no such law banning the import of vegetables existed. It might simply have been a pretext made up by local officials in reaction to a situation they were not prepared for and which might get them into trouble. Gützlaff also mentions that he frequently witnessed beatings of minor officials for no intelligible reason, although he suspected these beatings to be a show of power put on by major officials. Whatever the reason, the fact that the officials were punished so easily and often would support the view that they might make something

up in the hope of appeasing Gützlaff and his entourage and sparing themselves further trouble. From Gützlaff's remarks on the Korean language, it is also clear that he had serious communication problems: although he was fluent in Chinese, he had no knowledge of Korean. However, the potatoes that the Koreans "silently yielded" to let him plant somewhere near the seashore do not seem to have been the beginning of a success story for the white potato in that region.

THE FAILURE TO ACCULTURATE THE SWEET POTATO AS A FAMINE RELIEF FOOD

In the context of this study, the term 'acculturation' could have at least two meanings: firstly, the process of raising cultivars that are adapted to certain geographical circumstances, and secondly, the process of a tactical integration of the new plant and its products into a particular cultural structure. The details of the first point must be left to the agricultural scientists. Here, it should be sufficient to note that technically the sweet potato can be grown in the south of Korea and can yield good harvests there.⁶² The second point, the placing of the new plant into what, for lack of a better term, is to be crudely rendered as 'Chosŏn culture',⁶³ is what I will deal with in this second half of the article.

Both the lack of evidence for the widespread success of the sweet potato, and the ongoing activity in publishing manuals to overcome the rather limited scope of its cultivation, seem to indicate that the sweet potato was not integrated successfully into the Korean agricultural system as a staple food and that its impact was relatively small. At the least, as food historian Kang Inhŭi 姜仁姬 remarks, it took quite a long time to spread the sweet potato as a famine relief food.⁶⁴ It is remarkable that its dissemination took so long, as everything seems to have been in favour of the sweet potato: it can be planted with little equipment, it can be cultivated in places where grain

⁵⁹ Yi Kyugyŏng, *Oju yŏnmun changjŏn san'go*, p. 67.

⁶⁰ Charles Gützlaff, *Journal of three voyages along the coast of China in 1831, 1832 and 1833, with notices of Siam, Corea and the Loo-Choo islands. To which is prefixed an introductory essay on the policy, religion, etc. of China*, by the Rev. W. Ellis, (London: Frederick Westley and A. H. Davis, 1834. [Reprint without year and publisher]), pp. 341-342.

⁶¹ *Sunjo Sillok* 純祖實錄 <http://sillok.history.go.kr> [accessed 8 November 2009], 32nd year, 7th month, 21st day.

⁶² Today there are sweet potato cultivars that can be grown as far north as the Chinese provinces of Heilongjiang 黑龍江 and Inner Mongolia (內蒙古). See L. Zhang, Q. Wang, Q. Liu and Q. Wang, "Sweetpotato in China", in *The Sweetpotato*, ed. by Gad Loebenstein and George Thottappilly, (n.p.: Springer, 2009), pp. 325-358. However, these modern cultivars are not comparable to the plants available at the time.

⁶³ This phrase is not meant to imply the existence of some kind of monolithic or even 'national' culture. It would be far more accurate to suggest that there were a number of local, regional cultures.

⁶⁴ Kang Inhŭi, *Han'guk siksaenghwal sa*, p. 310.

⁶⁵ The sweet taste is important as it signifies 'good food' and makes new crops more likely to be accepted. Christoph von Gundlach, "Die Einführung neuer Grundnahrungsmittel. Dargestellt am Beispiel der Kartoffel", *Zeitschrift für Agrargeschichte und Agrarsoziologie* 35:1 (1987), 44-56, (p. 46).

will not grow, and it tastes, as its name implies, sweet.⁶⁵ Another factor – so far overlooked, I believe – that makes the sweet potato attractive is the fact that all parts of the plant are edible. While the leaves of the white potato are toxic and only the tubers are edible, the green parts of the sweet potato can be used for feeding animals or even for human consumption.

How far spread then was cultivation of the tubers? We cannot know for sure as there are no hard data on the extent of tuber cultivation in Korea until the modern era. There are no statistics on tuber yields in pre-modern Korea, so anything we say is based on conjecture. A few clues can be gathered, mostly from the publication of manuals and their stated or probable purpose. Based on his reading of the manuals, Yŏm Chŏngsŏp believes that the sweet potato spread in the region of Pusan and Tongnae at the end of the eighteenth century.⁶⁶ The publication of a new manual by Sŏ Yugu 徐有榘 in 1834 was aimed at further spreading the sweet potato in the south, from which we might deduce that there was sufficient cultivation and availability of seed in Korea at that time to render such a plan feasible. But the manual does not tell us much more. Other sources point out the problems of sweet potato cultivation, but there is not a single statement indicating that sweet potatoes were used successfully in famine relief. The cultivation of sweet potatoes therefore does not seem to have had much of an impact on the overall outlook of Korean agriculture until the twentieth century. It is possible that it was significant in some southern regions, but even evidence on that is scarce and impossible to quantify. There are few sources on the white potato and not much can be gleaned from them, except that, as stated above, the white potato had already been successfully used in the north in the mid nineteenth century (when Yi Kyugyŏng wrote his treatise) and that its cultivation was widespread at the beginning of the twentieth century.

Another approach to the question of how far the sweet potato had spread is to study its dissemination through the evolution of sweet potato cultivation techniques, as these are well documented in the *nongsŏ*. In Korea, the first of these techniques are those Cho Ŏm is believed to have brought back from Japan.⁶⁷ As has already been

mentioned, Chinese and Japanese manuals were very influential in the development of cultivation techniques. Historian Kim Chaesŏng 金在勝 believes that Kang P'illi was very active in the spread of the sweet potato in southern Korea from 1764, when he became the magistrate of Tongnae.⁶⁸ If he is indeed the author of the manual known as the *Kang-ssi kamjŏ po*, then that manual could also be understood in this context to have the aim of spreading the sweet potato in southern Korea. In 1834, Sŏ Yugu published his *Kamjŏ po*, which describes techniques that were supposed to facilitate the successful introduction of the sweet potato to Chŏlla province.⁶⁹ From this evidence we can gather that the spread of the sweet potato in Korea took a very long time (about 70 years before it reached Chŏlla) and was geographically very restricted. These two features of the tuber's dissemination might be the result of a lack of transportation and underdeveloped inter-regional communication (as indicated by Pak Chega), which in turn resulted in scant interest in using the little transportation there was for agricultural exchange. However, we have no means of double-checking these hypotheses in the manuals. There is no hard evidence on the cultivation of the sweet potato until the modern era and the effectiveness of the publication of manuals on its dissemination should be questioned: sweet potatoes were still not in widespread use in Korea at the beginning of the twentieth century and Japanese agronomists in the country claimed that because of a lack of frost-proof storage facilities and the frequent theft of the tubers from the fields, sweet potato cultivation was difficult. It is unlikely that techniques as essential as frost-proofing and theft prevention had once been known and then forgotten. These problems must therefore have been an obstacle to the cultivation of the sweet potato in earlier times too. The Japanese agronomists also claimed that one important reason for the non-development of tuber cultivation in Korea was the lack of knowledge about sweet potato cultivation methods.⁷⁰ Presumably a solution to the storage problem would have been in use, had sweet potato cultivation been widespread.

The failure of the sweet potato was only partial, however. The tuber failed in its intended role as a famine relief food, but it was highly successful as a cash crop. Even though

⁶⁶ Yŏm Chŏngsŏp, "Chosŏn sidae kuhwang chŏngch'aek", p. 139.

⁶⁷ Ibid., p. 129.

⁶⁸ Kim Chaesŏng, "Cho Ŏm-ŭi koguma chŏnp'a", p. 57.

⁶⁹ Yi Ch'unnyŏng, *Yijo nong'ŏp kisul sa*, p. 86.

⁷⁰ Chŏsen sŏtokufu nŏji shikenjŏ (ed.), *Chŏsen sŏtokufu nŏji shikenjŏ*, vol. 1, 123.

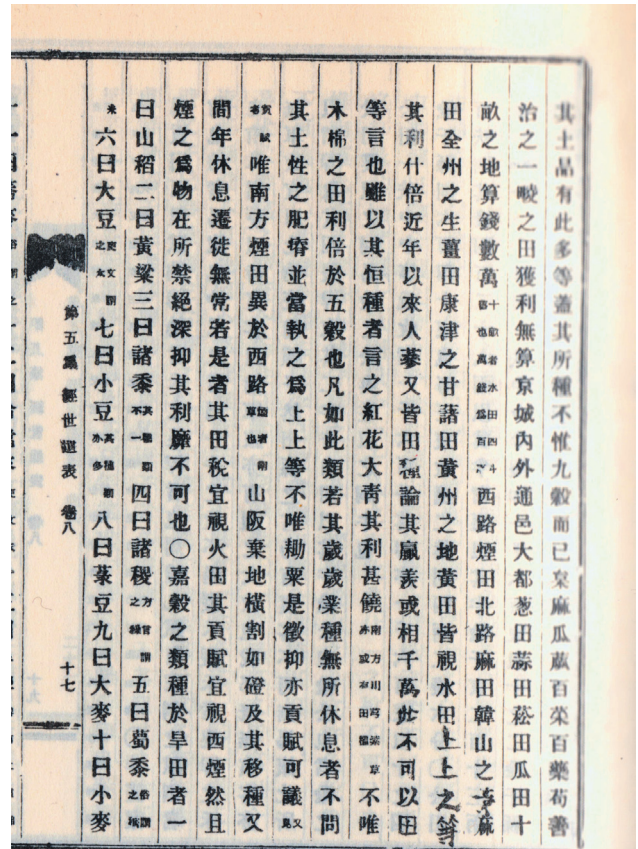
no extant sources promote the use of sweet potatoes as a cash crop, they became locally important for this purpose. It is also questionable whether the success as a cash crop should be seen as a failure, though it was certainly not what the authors of the *nongsŏ* had intended. Indeed, the sweet potato became a luxury item and was traded at high prices, as indicated in the *Kyŏngse yup'yo* 經世遺表, a socioeconomic study by the late Chosŏn thinker Chŏng Yag'yong 丁若鏞 (1726-1836), who describes the situation of sweet potato fields in Kangjin as follows:

“The sweet potato fields of Kangjin 康津 and the foxglove fields of Hwangju 黃州⁷¹ are all comparable to paddy fields of the highest rank. But the profit they yield is ten times as high.”⁷²

Sŏ Yugu also touches on the sweet potato's luxury status in his grand-scale *nongsŏ*, the *Imwŏn kyŏngjeji* 林園經濟志, in which he describes the southern province of Chŏlla as the region most deeply involved in commercial sweet potato production.⁷³

It is not clear why the sweet potato, intended by its advocates as a famine relief food, should come to be eaten almost exclusively as a luxury food. Possibly its luxury status has to do with the generally higher food flexibility of the upper social classes⁷⁴ and the taste of those classes for exotic foods. The lower classes, not used to exotic food and regarding “substitute foods” as inferior, were more likely to refuse the new food, unless pressed hard by hunger. Also the difficulty of transporting bulky tubers made them unfit for sale beyond the local area, and the high cost of transport should be taken into account. The development of the sweet potato's luxury status is another indication of the manuals' lack of influence, which specifically advocate the use of the tuber for fighting famine. The Japanese agronomists' comments on the lack of knowledge of cultivation techniques in Korea are likewise evidence of the manuals' failure to disseminate information about the sweet potato.

It was only much later that tubers became an important part of the Korean diet. As late as the early twentieth cen-



Chŏng Yag'yong's *Kyŏngse yup'yo* 經世遺表 (Doctrines for Good Government, 1808-1817)

ture, signs appeared of an increasing practical interest in sweet potato cultivation. In 1907, experiments aimed at improving cultivars were initiated at a scientific research station in Suwŏn 水原.⁷⁵ In North Korea food shortages led to the increased dietary importance of white potatoes, which are now processed into a multitude of products. Since the 1990s, white potatoes have been one of North Korea's major crops and their cultivation is an important part of food policy, since many substitutes for other food-stuffs are produced from processed white potatoes.⁷⁶

North Korea produced 392,000 tons of sweet potato in 2009, compared to 283,000 tons in South Korea. The total yields in North and South Korea are marginal if compared to an overwhelming yield of 100,215,000 tons in China, but both countries can still be classed as large-scale sweet potato producers on a global scale.⁷⁷ Since the 1970s,

71 Foxglove was, and still is, an important medical ingredient.

72 Chŏng Yagyong 丁若鏞, *Yŏyudang chŏnsŏ* 輿猶堂全書, <http://db.itkc.or.kr> [accessed 10 December 2009], p. 152a.

73 See Kim Yongsŏp 金容燮, *Chosŏn hugi nongŏpsa yŏn'gu 2* 朝鮮後期農業史研究 2, (Seoul: Ilhogak 一潮閣, 1974), p. 157.

74 Christoph von Gundlach, “Die Einführung neuer Grundnahrungsmittel”, p. 47.

75 Kim Chaesŭng, “Koguma-ŭi Chosŏn chŏllae”, p. 98.

76 Im Sang'ŏi 임상철, *Pukhan nong'ŏp* 북한농업, 2nd ed. (Seoul: Sŏil 서일, 2000), p. 93.

77 Data are taken from Vincent Lebot, *Tropical root and tuber crops: Cassava, sweet potato, yams and aroids*, (Wallingford, Oxfordshire and Cambridge, MA: CAB International, 2009), p. 97. Lebot's data refer to the numbers given by the Food and Agriculture Organization of the United Nations.

the area of land dedicated to sweet potato cultivation in South Korea has decreased by about 90% and seems now to have stabilized around 14,000 hectares. In 1971, an area of 111,229 hectares was used for sweet potato crops.⁷⁸

The reasons given above do not fully explain the failure of the tubers in Korea. Sweet potatoes appeared to offer an opportunity to rectify the hardships of malnutrition and overcome the yearly spring crisis. So why did the sweet potato not catch on as a famine relief food in Korea? The answer seems, at least in part, to be a cultural one, although economic factors also need to be taken into account. The cultural effect, as will be outlined below, was clear to contemporaries: the Chosŏn people were just not able to overcome their feeling that grains were the food they were *meant* to eat – a thoroughly ‘cultural’ notion.

TUBERS IN A GRAIN CULTURE

Tubers were known in Korea long before the sweet potato was introduced. The most important tubers used as a food-stuff in the country were yam (*Dioscorea opposita-japonica*) and taro (*Colocasia esculenta*). The *Tongŭi pogam* 東醫寶鑑, a medical handbook compiled by a team around Hŏ Chun 許浚 (1546–1615) in the late sixteenth century, states that yam and taro had spread through Korea.⁷⁹ The *Sillok* records that in the year 1689 yam tubers were given to King Sukchong 肅宗 (r. 1674–1720) as a gift.⁸⁰ If yams were considered worthy of a king, they must have been held in high esteem. It is possible they were thought to be a tonic. The respective names given for the plants are *t’oran* 土卵 (‘earth eggs’ in Sino-Korean) for taro and *ma.h* 마하 (which is ‘pure’ Korean)⁸¹ for yam. In the case of taro, the *Tongŭi pogam* also tells us that there was a cultivated form of the plant and a ‘poisonous’ wild form. While the meaning of ‘poisonous’ is unclear and may not mean ‘toxic’,⁸² these comments do suggest that there were two plants classed as ‘taro’ of which only one (or perhaps neither)

corresponds to what we now identify as taro. Nonetheless, we can assume from the evidence above that Koreans were not unfamiliar with using tubers as food and that, at least locally, they were a part of the cuisine. It could also be assumed that at least some Korean cultivators in the southern part of the country would have been accustomed to tuber cultivation, which was an obstacle to the cultivation of tubers in, for example, England.⁸³ Therefore, it seems unlikely that the problems with the introduction of tubers had anything to do with the plant being unknown or seeming strange to farmers, as had often been the case in Europe. Sadly, no sources tell us whether the newly introduced tubers replaced taro and yam, as seems to have been the case in China.⁸⁴

Even though tubers were evidently known from early times on, Korean agriculture can be characterized as being focused on grain production. Being the most important crop, grain naturally features prominently in culture. Cultural habits of food selection become deeply ingrained in production patterns and, as James Walvin states, in the case of Korea “touched on people’s deepest persistent values and customs, and represented of course much more than mere nutrition or the satisfying of hunger”.⁸⁵ More specifically, Chosŏn food culture can be characterized as a culture of “rice first”.⁸⁶ While barley was the fare of the general populace and also the less wealthy local elite, rice was thought to be the ideal food and was regarded as being the foundation of the state’s economy. Even though it was sometimes hard to get, rice was “an ideal component of any meal.”⁸⁷ While most of the reasons for the importance of grain can easily be traced back to economics grounded in the mode of production in Chosŏn times, there is also a cultural side to this problem. Ohnuki-Tierney has demonstrated how rice was placed at the centre of a Japanese culture of food and how it came to constitute one of the tenets of Japanese ‘self’.⁸⁸

78 Im Sangch’ŏl, “Koguma-ŭi chaebae-wa iyong hyŏnhwang 고구마의 재배와 이용현황”, in *Cho Ōm yŏn’gu nonch’ong*, ed. by O Yŏnggyo, 153–220, (pp. 158–159).

79 Hŏ Chun 許浚 et al., *Tongŭi pogam* 東醫寶鑑. (Seoul: Namsandang 南山堂, 1976), p. 714 and p. 722.

80 *Sukchong Sillok* 肅宗實錄 <http://sillok.history.go.kr> [accessed 8 November 2009], 15th year, 1st month, 18th day.

81 By ‘pure’ Korean I mean that there are no obvious cognates in Chinese or Japanese and that the word could be considered to be found exclusively in the Korean lexicon. It is interesting that the word *ma.h* is native to Korea, as this might suggest there was a long cultural history of the plant in the country.

82 The complex problem of the concept ‘poisonous’ (*du* 毒 in Chinese, pronounced *tok* in Korean) in the Chinese tradition of food characterization – in which Korean medical manuals stand – is addressed by Eugene Anderson, *Ecologies of the Heart: Emotion, Belief, and the Environment* (Oxford: Oxford University Press, 1996), Chapter 3: “Chinese Nutritional Therapy”, p. 207.

83 James Walvin, *Fruits of Empire*, p. 106.

84 Francesca Bray, *Science and civilisation in China*, pp. 530–531.

85 James Walvin, *Fruits of Empire*, p. 112.

86 Michael Pettid, *Korean Cuisine*, pp. 164–165.

87 *Ibid.*, pp.28–29.

88 Emiko Ohnuki-Tierney, *Rice as Self: Japanese Identities through Time*, (Princeton: Princeton University Press, 1993).

It remains to be proven that Korean food is a similar case; quite possibly it is not. However, it is clear that rice was an important part of Chosŏn culture in its broadest sense and that it played an important role in the construction of cultural awareness of social groups in Korea, which were differentiated by rice consumption or lack thereof. While it has been argued quite convincingly that the ‘culinary identification’ of a foodstuff depends mainly on how it is flavoured,⁸⁹ it still seems that the underlying staple food, especially if it is not flavoured at all, is significant for cultural identity. From a cultural-historical perspective, it might be intriguing to consider how the sweet potato conveys meaning in the cultural sphere – in other words, how it is a cultural medium. This meaning would be different from that of grains and would thus have a different influence on both individuals and society.

Still, I believe that the cultural aspect merely sets the ‘tone’ for the way tuber cultivation developed in Korea. The most important force in deciding the dynamics of the cultivation of non-grain staples was that they must have seemed a danger to the socioeconomic system. This fear explains the ideology of a grain-based diet, which was employed to bolster the rule of an elite class whose economic well-being was based on grain taxes. Even though tubers were mostly intended by the reformers for use on land unsuited to grain cultivation, the fear that they might catch on and endanger grain cultivation would have been very real. That is not to say that collecting taxes on tubers would have been impossible. But it would have been novel and thus suspicious to the elites, who of course did not suffer from famine and for whom the grain-based system worked rather well. Indeed, the reaction to the spread of white potato cultivation in Switzerland in the later half of the eighteenth century (under a much less strict regulatory system than that employed in Chosŏn Korea) supports the idea that the introduction of a new staple into an economy based on another staple would likely be seen as a danger by the ruling class.⁹⁰ Similar cases are also recorded for south-western Germany.⁹¹ While a shift towards a tuber-based diet and, perhaps more importantly, a change to the tax system would not have been impossible, they would have produced some

sort of social mobility – upward as well as downward – at least for a period of transition in which individual initiative might be effective. Such social mobility would have endangered the hereditary ruling classes grip on power, and therefore a strong strain of conservatism can be expected in their reaction to the cultivation of new crops. It is, therefore, probable that the ruling elite would have used their power to oppose large-scale tuber cultivation in Korea.

Opposition from the ruling class was not the only problem that enterprising pioneers of the tuber had to face, though. Tubers require little or no post-harvest processing and are therefore much easier to harvest than grain. Correspondingly, it was also much easier for thieves and corrupt officials to steal tubers. A discussion of tuber theft can be found in the *Sillok* – records for the 18th year in the reign of King Chŏngjo 正祖 (1794) on the 25th day of the 12th month:

In the settlements in the coastal areas, there is a thing that is called the sweet potato. [...]

It would be fitting to supply the starving people with sweet potatoes, as [has been done in China] in Fujian 福建 and Zhejiang 浙江. But the customs of this land are truly remarkable. The sweet potato is only used as a dainty for its good taste and that is it. No one can use it as a substitute for cooked grains⁹² and thus use it against famine. I deeply regret this. [...]

In the beginning, when the sweet potato came to Korea, the people competed for the tubers and used them to make their lives richer [...] and thus the sweet potato was gradually cultivated more and more in Korea. But before it could become plentiful, the military settlements came to confiscate them. After that, the greedy officials followed in their footsteps and came to [people’s] doors, called and shouted and took sweet potatoes away. Some officials took a hundred tubers, others took as much as [grows on] one ki 畦. Those who planted sweet potatoes got into difficulties and those who had not yet planted [them] warned each other against it. So the efforts in cultivating [the sweet potato] and [finding good] tech-

⁸⁹ Elisabeth Rozin, “The Structure of Cuisine”, in *The psychology of human food selection*, ed. by Lewis M. Barker, (Westport, CT: AVI, 1982), 189-203, (p. 197).

⁹⁰ Hubert Steinke, “Die Einführung der Kartoffel in der Waadt 1740 – 1790. Agrarmodernisierung aus bäuerlicher Sicht”, *Zeitschrift für Agrargeschichte und Agrarsoziologie* 45 (1997), 15-39, (pp. 24-25).

⁹¹ Christoph von Gundlach, “Die Einführung neuer Grundnahrungsmittel”, p. 51.

⁹² ‘Cooked grains’ should probably be read as denoting ‘staple foods’.

*niques [for its cultivation] gradually came to be not as good as they had been. At the moment, the sweet potato is very rare and expensive.*⁹³

This report shows that at least twenty years after the sweet potato had been introduced its cultivation was still not widespread and, as the text indicates, was quite a gamble for those who ventured to try it. Also, the progress in cultivation techniques was hampered by the frequent setbacks the cultivators had to endure. While wanton requisition by corrupt officials was surely not limited to tubers, these were much easier to take, as they can be cooked immediately after being dug up. The above record from the *Sillok* also shows that the central government was aware of the state of sweet potato cultivation. However, no effective measures were taken to improve the situation – apparently, the problem was not deemed to be urgent. Another scholar who dedicated a lot of energy to the sweet potato was Yi Kwangnyō 李匡呂 (1720–1783), who devoted himself to studying the tuber through the *Nongzheng quanshu* and more or less agreed with the view presented by Xu Guangqi.⁹⁴ Yi Kwangnyō had a highly original mind, as is proven by his studies on the teachings of Wang Yangming, long looked upon as heterodox in Korea.⁹⁵ In his writing, Yi Kwangnyō stresses that, though he was at first sceptical about this point, he came to accept that one of the obstacles to sweet potato cultivation in Korea was the grain-centred culture and the assumptions that governed food selection:

Gradually, those who planted sweet potatoes [harvested] more and more tubers, but much of [the crop] was lost because seedlings were held back again. So I came to worry again that the methods of cultivation were not lucid and good enough and that [for this reason] people planted the sweet potato one or two times and then stopped [...]. Today, only in the southern provinces are

there many who cultivate sweet potatoes. But they all use the sweet potato as a tidbit, [...] a snack. And it is even impossible for anyone to substitute other food with it and to thus use it to fight famine.

Yi Kilbo 李吉甫⁹⁶ explained the methods of sweet potato cultivation to me. I said to Yi Kilbo: “Dear Sir, why do you not cultivate this plant and let it flourish, so that the people may see its effect?” [Yi] Kilbo said: “The people of our country are used to eating big bowls of cooked rice.⁹⁷ How could they bear to substitute tubers for rice? Even though this plant is good and nice, it cannot in the end help our country to the same extent as in China.” At that time I thought that these words were probably not quite right. But when I think about it now, it seems to me as if [Yi] Kilbo had in fact a rather lucid grasp on this matter. Still, with all things use and abolition, rise and fall have its natural time. This is so in the cases of plants like pumpkins, tobacco and cotton, which were not originally cultivated in China, but are all in daily use in China today.⁹⁸ [...] [These plants] were imported to the eastern country [Korea] – today one does not know [...] how many hundreds of years ago that [was]. People today [...] believe that they are indigenous plants which have always been here. No one [...] remembers that they originally came from another country. Now, this will not be any different with the sweet potato. Especially as the sweet potato tastes so good and cannot even be compared to other plants!

So I ponder again why the sweet potato has [had] no success. Maybe it is because it tastes so good and because the poor [...] of the country cannot [partake of] its benefits and thus cannot lighten their poverty.⁹⁹

Chosŏn grain culture is described here as a marker of otherness in comparison to China. The cultural necessity of eating cooked grain as a staple food is also portrayed as the main reason why tubers could not become popu-

⁹³ *Chŏngjo Sillok* 正祖實錄, <http://sillok.history.go.kr>, [accessed 8 November 2009], 18th year, 12th month, 25th day.

⁹⁴ O Sugyōng, “Chosŏn hugi iyong husaengak”, p. 10.

⁹⁵ Yŏm Chŏngsŏp, “Chosŏn sidae kuhwang chŏngch’aek”, p. 137.

⁹⁶ It is not clear who this is. There is one Yi Kilbo who lived from 1700 to 1771, but he is not likely to be the person in question, as he is older than Yi Kwangnyō and therefore should not be referred to by just his personal name, as Yi Kwangnyō refers to him here.

⁹⁷ It has in fact been argued that one of the most striking features of the food culture in Chosŏn Korea was the consumption of enormous quantities of food. See *Chosŏn sidae saenghwalsa 3: Ŭisikchu sara innŭn Chosŏn-ŭi p’unggyŏng* 조선시대 생활사 3 -衣食住 살아있는 조선의 풍경, ed. by Han’guk komunsŏ hakhoe 한국고문서학회, (Seoul: Yŏksa pip’yŏngsa 역사비평사, 2006), p. 129 ff. This reference does not imply that there was a steady supply of such quantities of food; rather, it is meant as an explanation for food shortages, which are supposed to be caused in part by too much consumption. For general food shortages see Kang Inhŭi, *Han’guk siksaenghwal sa*, p. 315.

⁹⁸ These are all plants that had already been introduced to Korea too and were used there with great success. In this instance, Yi Kwangnyō uses China as an example that Korea should emulate in the case of the sweet potato.

⁹⁹ Yi Kwangnyō 李匡呂, *Yi Ch’ambong chip* 李參奉集, <http://db.itkc.or.kr>, [accessed 5 November 2009], pp. 256b–256d.

lar in Korea. Here, it seems, a myth is being constructed of the superiority of rice. A rational explanation based on cultural theory is difficult: myths are irrational; they are in fact empty signifiers and only come into being and survive by the process of being perpetuated, regardless of their truth.¹⁰⁰ Even though Yi Kwangnyō remarks on the irrationality of grain preference in food selection, he accepts that Yi Kilbo is right about the reason for the lack of acceptance of the sweet potato. As stated above, Yi Kwangnyō was a reform-minded scholar who was not easily discouraged by novelty. His support for Yi Kilbo's conclusion shows how strongly the situation suggested a cultural explanation for the lack of success in spreading the sweet potato.

All that might give us an indication of why sweet potato cultivation was possible and successful in China and Japan, but not in Korea: Korean food culture was different, and less open to the introduction of tubers as a staple. While this theory brings up new problems¹⁰¹ and is not a satisfying answer if taken alone, culture should be considered as an important factor. Food culture is extremely complex and, as in all fields of cultural studies, contains so many trapdoors that I must concede further inquiry to specialists in that field.

Half a century later, around 1850, Yi Kyugyōng also stresses in his *On the Potato* that grain is the core foodstuff according to the cosmic order:

Heaven brings grains and thus feeds our people. And when [Heaven] finds that this is still not sufficient [Heaven] brings crops like fruits and pumpkin to remedy this lack so that there is no need to worry. But the Great Change fluctuates and Yin and Yang are moving. In between there are disasters, floods and draughts. Thereupon people get caught in famines. No one can change this, regardless of the merits of Heaven and the labour of man. In between, Heaven is worried and does not forget [the suffering of man], like a lovingly caring mother, who is attached to her child and cannot

bear to leave it behind or to expel it. Thereupon, Heaven brings a thing that water and draught may not harm and that can be used for the nourishment of the people in good and in meagre [times] alike. Its name is 'sweet potato'.¹⁰²

To Yi Kyugyōng, Heaven is a caring deity¹⁰³ that looks after the needs of man but is not able to influence the recurrence of calamities that endanger food security. Grains – the normal staple – are what man is meant to eat. Tubers are then presented as Heaven's answer to the ongoing hardship that man faces due to being unable to obtain this ideal food.

If grain is perceived as the ideal food, one way to make sweet and white potatoes more culturally acceptable is to change them into grain. There are two ways to achieve this. One way is to process the tubers into a form that resembles grain products, or to mix them with grain, as is still done today with *kamjabap* ('potato rice'). In this way the tubers become more acceptable – more grain-like and therefore more food-like. This alteration can be understood as part of the process in human cuisine that Rozin describes as "transforming potential food into real food".¹⁰⁴ Another way to change tubers into grain is to declare them to *be* grain. This second approach is still visible today in East Asia, where tuber yields are translated into grain equivalents.¹⁰⁵ The category of 'grain' can apparently be extended enough to allow such a reinterpretation of food. Maybe this expansion of the category is possible because the differences between barley and rice in cultivation, processing, storage and, finally, in use and taste are so significant that the categorization of both of them as grain is obviously a construction that requires some flexibility.

The development of tuber cultivation in Korea is also apparent in fiction. In Chosōn times there are only a few poems that mention the new tubers. In the colonial era tubers are mentioned more often in literature, and there is even a full-length novel called *koguma* (*The Sweet*

¹⁰⁰ A similar view is held by Roland Barthes, *Mythen des Alltags* (Frankfurt am Main: Suhrkamp, 1964), pp. 97-98.

¹⁰¹ For instance: Is there really such a thing that can be summed up as 'culture'? And if so, what are the characteristics of Chosōn food culture in comparison to other food cultures?

¹⁰² Yi Kyugyōng, *Oju yōnmun changjōn san'go*, p. 65.

¹⁰³ Some might feel this is a rather careless use of the word 'deity'. By using this word, I do not mean to make any definite statement on the metaphysical implications of the world view of Yi Kyugyōng, which to my knowledge has not yet been studied in depth. I would suggest, however, that there is a theistic element in his description of heaven, which he does not see as an abstract term for 'nature'.

¹⁰⁴ Elisabeth Rozin, "The Structure of Cuisine", p. 190.

¹⁰⁵ Dwight Perkins, *Agricultural Development in China: 1368-1968*, (Edinburgh: Edinburgh University Press, 1969), pp. 270-271. Eugene N. Anderson, *The Food of China* (New Haven and London: Yale University Press, 1988), p. 136 and p. 149. Kim Iktal 金益達 (ed.), *Nong'ōp taesajōn* 農業大事典. (Seoul: Hagwōnsa 學園社, 1962), p. 36.

Potato) by Yi Kūnyōng 李根榮 (1909-?), published in 1946. The novel deals with the social change and the decay of traditional rural society in post-colonial Korea.¹⁰⁶ There is also a short story called “*kamja*” (potatoes) by Kim Tong’in 金東仁 (1900-1951), published in 1935, in which the potato symbolizes the life of a woman from the northern part of Korea.¹⁰⁷ Perhaps this late appearance of the tubers in literature is no coincidence: only after they had become more widespread, become part of the culture and been linked into a net of images and symbols could they be employed to convey meaning.

THE SWEET POTATO AS A HEALTH FOOD

Another socio-cultural aspect of food is its use as medicine. This aspect carries a range of implications because of the much broader notion of ‘medicine’ in the Sinitic cultural tradition than in the ‘modern western’ medical tradition.¹⁰⁸ The tubers known before the advent of the sweet and white potato in Korea, yam and taro, were considered to be tonics, as has been mentioned above. It is thus easy to imagine that the new tubers, which were similar in appearance and use, were assumed to have the same medicinal properties. The sweet potato certainly does not lack nutritional value and is much higher in calories than the white potato. An important characteristic of the sweet potato is its high vitamin C content, which would have been highly beneficial to nutrition in Chosŏn times. However, contemporaries are unlikely to have been aware of the importance of vitamin C, whereas the tuber’s higher calorie content would have been noticed.¹⁰⁹ Cash crop cultivation of the sweet potato would tie in with this view of tubers as a health food and might indicate that contemporaries had some empirical knowledge about the nutritional effects of the tubers.

Modern authors who, referring to the wisdom of the now, ancients, praise the medical benefits of the sweet potato should, however, be approached with caution. The obsession with health and the notion that it can be gained by eating healthily has a growing following in Korea (as well as worldwide) and big money is involved in perpetuating and maintaining this trend. The sweet potato has valuable nutritional qualities and might even have ben-

efits in cancer prevention.¹¹⁰ It is, however, no panacea. Its use in Chosŏn times should be seen in the context of nutrition rather than medicine, even though the two were even less strictly separated than they are in Korea today.

CONCLUSION

It seems that focusing on the impact of agricultural change or the potential for such change in theory and practice can be a good starting point for a fresh look at cultural and intellectual phenomena in Chosŏn society. However, more research would be necessary to ascertain whether this approach could be applied beyond the two tubers. It would be interesting to compare the case of the sweet and white potatoes with the introduction of other crops, maize being an obvious candidate.

Korean scholars originally intended to use the sweet potato as a staple that could be substituted for grains to prevent famine. But the sweet potato was not used extensively in the late Chosŏn period and its introduction seems to have had little effect on the big picture of agriculture at the time. Instead, sweet potatoes were grown in some parts of the country as a cash crop for niche markets and large-scale cultivation did not appear to set in until the modern era. The conditions which the sources show – or which can be tentatively reconstructed – with regard to the introduction and acculturation of the sweet potato in Korea contribute to the picture we can draw of late Chosŏn society, especially of the lives of the peasants. Even if my statements and conclusions remain hypothetical, they will, I hope, inspire the examination of late Chosŏn society from different angles. Reasons for the failure of the sweet potato in Korea were predominantly political, economic and cultural, even though there were also practical problems – focusing on the sweet potato thus highlights different aspects of society. The economy was organized around the production and (unequal) distribution of grain and changes to this system would have endangered the ruling class’s material foundation and possibly its grip on power. This could be one reason why tuber cultivation was, at least in certain regions, hindered by the direct and indirect actions of the local officials and strongmen, as the sources above have shown. Supporters

¹⁰⁶ See Chŏn Hongnam 全鴻南, “Yi Kūnyōng ron 이근영 론”, *Han’guk ōnō munhak 한국언어문학* 30 (1992), 405-428, (pp. 413-414).

¹⁰⁷ See Pak Hongsik 박홍식: “‘*Kamja*’-ūi sangjingsŏng ‘감자’의 상징성”, *Usŏk ōmun* 又石語文 2 (1985), 87-101, (p. 92 ff). An English translation of *Kamja* can be found in *Flowers of Fire: Twentieth-century Korean Stories*, ed. by Peter H. Lee. Rev. ed. (Honolulu: University of Hawaii Press, 1986), pp. 10-18.

¹⁰⁸ This has been described by Eugene Anderson, “Chinese Nutritional Therapy”.

¹⁰⁹ For nutritional data on the sweet potato, see G. Padmaja, “Uses and nutritional data of sweetpotato” in *The Sweetpotato*, ed. by Gad Loebenstein and George Thottappilly, pp. 287-324, (p. 212 ff).

¹¹⁰ Im Sangch’ŏl, “Koguma-ūi chaebae-wa iyong hyŏnhwang”, p. 154.

of the tubers were mostly literati who were not linked to the powerful elites.

As contemporaries had already realized, a cultural preference for grains was prevalent in Chosŏn and was not easy to overcome, so culture played a role too – but it could be argued that this also shows how much of what we call ‘culture’ is really based on economic interests. Economics decides the framework within which culture can develop, as it provides the material basis, which in the case of Chosŏn was grain production and the interests connected with it. All those factors is entangled in the complex structures that make up society and culture, and its effects can only be understood in this context. In such an environment, tuber cultivation could not gain a serious foothold, even though the continued extensive publication of *nongsŏ* texts clearly proves the expectations, even excitement, that the introduction of the sweet potato generated in Korea. Various strategies were adopted from different motives in order to overcome these aversions and help the spread of the sweet potato. The writing of books and pamphlets was the strategy preferred by the progressive literati, but their message seems to have failed to reach the peasants. Sale as a luxury commodity was a completely different approach to the tubers. Other options were declaring sweet potatoes to be basically grain or pointing out their nutritional and medicinal benefits.

The white potato, on the other hand, was well received by the peasants from the beginning, and successfully grown and spread by what could be understood as an underground movement. Peasants in the north even engaged in economic resistance against the suppression of potato cultivation, by ignoring the ban on growing the tubers. The spread of the white potato also shows that there was a functioning interregional network outside the literati and that, at least in the border region, this network was also able to transport knowledge across state borders.