



Soy Sauce and Local Cuisine

Characteristics of Soy Sauce Found in Regional Dishes

Food coordinator and cooking culture researcher, Nami Fukutome
Aoyama Gakuin Women's Junior College, Associate Professor, Yuka Utsunomiya

1. Soy Sauce: From Taste of Home to Flavor of the Region

Soy sauce and miso are traditional Japanese fermented seasonings made with *koji*, a starter inoculated with *Aspergillus oryzae* mold. In the past, each family created its own miso called *temae miso* with handmade *koji*. *Temae* simply means ‘my’, but *temae miso* translates as ‘self-flattery’, showing the pride each family took in their unique homemade miso. Soy sauce was also made at home based on soy-beans and wheat or barley. The *moromi* mash was pressed to extract soy sauce, and the lees that remained were enjoyed as a side dish with rice (*shoyu/shoya/shoi no mi*), a good example of Japan’s food culture of no waste.

Commercial soy sauce production began in the early Edo period (1603-1867) in the Kanto region (Tokyo and neighboring prefectures), and saw dramatic development due to high trade activity from the mid to latter parts of the same period. In the Kansai region (Osaka, Kyoto and surrounds), *usukuchi shoyu* (light-colored soy sauce) was produced from early Edo onwards, and the Chubu region (Aichi, Mie and Gifu prefectures) developed *tamari shoyu*, realizing the value of the dark liquid that seeped out of miso during the fermentation process. The mostly wheat-based *shiro shoyu* was born in Aichi in the late Edo period.

Many regional makers of miso and soy sauce were incorporated during the early 1900s. Often they switched from *sake*-brewing or expanded their miso-making side business into their core business and then extended further into soy sauce production. Over time, people began to buy their *koji* from miso companies or *koji* specialist shops instead of producing it at home. And particularly in urban areas, people stopped making their own buying it from soy sauce makers instead. Regional miso and soy sauce industries flourished in response to the needs of consumers, and the individual tastes of homes were replaced by the flavors of the region.

2. Emergence of Sweeter and Umami-rich Varieties in the Post-war Period

Originally, soy sauce was much more expensive than *sake* and rice and thus was only used on special occasions ¹⁾. A survey on home cooking conducted in

the late 1950s reveals that while it was still common to make miso at home, most households purchased their valuable soy sauce outside, and brides who wasted soy sauce were scolded by their mothers-in-law ²⁾. Some families continued to make their own, but high economic growth in the 1960s led to rapid industrialization of soy sauce production. The price came down so much that soy sauce became a daily seasoning, used generously in all kinds of dishes. Many companies were forced out of business unable to compete in the distribution of soy sauce, which was now cheaper than mineral water. However, some small and medium-sized regional companies succeeded by specializing in products characterized by local flavors. This enabled them to compete with large-scale producers who had built and expanded their networks nationwide by keeping up with the trends of the times.

Looking at the evolution of tastes, most soy sauce in the pre-war period is thought to have been made through a natural fermenting process without adding sweeteners or umami ingredients, just like in homes. Food scarcity during and after World War II led to the introduction of new techniques giving producers the freedom to change the levels of sweetness and umami. In a bid to differentiate their products and compete with national brands, second or third-generation owners of soy sauce companies (established pre-war) developed soy sauce recipes fitting the tastes of their local customers. Thus, today we find many varieties of soy sauce across the country ranging from very sweet to sweet, as well as umami-rich types with mild saltiness.

Because there is no standard national soy sauce flavor, we can learn a lot about local tastes and preferences by looking at local varieties. In this study, we first divided the nation into ten broad areas to focus on local cuisine that best reflects that region’s food culture and then we attempted to ascertain the local tastes and soy sauce preferences. We assumed these to be rooted in each region’s natural environment – factors of climate, geography and homegrown products – as well as social background, as seen in the history and culture.

This study also hoped to uncover dishes and unique uses for soy sauces that should be preserved and passed on to future generations. Fast-paced information exchange and

1) Hirano Masaaki (1979), *Nihon Ryori Tankyu Zensho* Vol. 11 “Shoyu Tenpura Monogatari”, KK Tokyo Shobosha, Tokyo, p13.

2) Japan Society of Cookery Science (2014, 2015) *Japanese Home Cooking: Dishes to Hand Down to the Next Generation*. Research Committee for 2012-2013 and 2014 report on accounts from interviews.



Nami Fukutome, PhD

Born in Kochi Prefecture. Food coordinator and part-time lecturer at academic institutions including Ochanomizu University and Jissen Women's University. Work includes comparative studies of ingredients and recipes in Japan and overseas, tasting workshops introducing Japanese food culture, and the development of programs for practical school lessons for passing on knowledge regarding Japan's traditional fish and rice-eating culture.



Yuka Utsunomiya, PhD

Born in Oita Prefecture. Chef and digital archivist. Aoyama Gakuin Women's Junior College Cooking Laboratory Associate Professor. Survey research on school lunch menus for preservation and transmission of authentic Japanese food. Ongoing field studies in northern Thailand since the 1990s on how lifestyles have been impacted by economic development and information technology and how food culture has been transformed.

industrialization, and constant advances in distribution networks all point to greater uniformity of flavors and foods, so it is important for us to identify and preserve regional differences. Though merely an interim report,

we would like to share here some of the typical soy sauce-based dishes from local cuisine around Japan and what they tell us about the character of local soy sauces and local taste preferences.

Soy Sauce Varieties and Definitions

There are countless varieties of soy sauce. While types are defined in the Japanese Agricultural Standards (JAS) and Quality Labeling Standards there is a great deal of variation in color and flavor even within the same category, making it somewhat confusing for the consumer. Here we have summarized the main types and their definitions in an effort to improve understanding of the soy sauces found most frequently in homes and around Japan.

We need to focus on two key items on the label: name and ingredients. If the product is a soy sauce, its name will be one of the five categories designated by JAS, followed by the production method in brackets. For example, if the label says *koikuchi (kongo)* then we know it is a common soy sauce made with the mixture method. If the product is not by definition a soy sauce, the label needs to clearly display the precise type of soy sauce-based seasoning it is.

Five Categories of Soy Sauce

Soy sauce is classified into five categories by JAS. Officially, JAS uses *hiragana* notation, however we often find labels with *kanji* Chinese characters, or a combination of both writing systems.

Koikuchi shoyu (common soy sauce)

Koikuchi shoyu accounts for more than 80% of nationwide soy sauce production by volume. Most use equal quantities of soybeans and wheat. Fermentation and aging through the longer natural fermenting method (*tennen jozo*) yields a darker color. Koikuchi shoyu produced through either the mixed fermenting method (*kongo jozo*) or mixture method (*kongo*), uses a special koikuchi amino acid liquid.

Usukuchi shoyu (light-colored soy sauce)

Usukuchi shoyu uses equal quantities of soybeans and wheat, as with koikuchi shoyu, however steps are taken during production to ensure lighter color. Both mixed methods use a special usukuchi amino acid liquid in production and the ratio is responsible for the wide range of color possibilities. On labels, the soy sauce industry uses the kanji 淡, meaning faint and pale, instead of 薄 meaning pale or thin, drawing attention to the subtler color and soy sauce aroma.

Tamari shoyu (tamari soy sauce)

Tamari shoyu uses only soybeans or soybeans with a small quantity of wheat. The moromi (mash) is prepared with a relatively small amount of salt water, resulting in a rich and viscous liquid.

Shiro shoyu (extra-light-colored soy sauce)

Shiro shoyu is made predominantly from wheat, with just a small quantity of soybeans mixed in. It is made through an extremely controlled manufacturing process with a short three-month fermentation and aging period to ensure the color does not deepen.

Saishikomi shoyu (refermented soy sauce)

In the preparation of the moromi for saishikomi shoyu, salt water is replaced by kiage soy sauce. This results in darker color and more complex flavors. Sometimes also referred to as *kanro shoyu* or *nidan shikomi*.

Other Soy Sauce-Related Terms

[*Kiage* (raw soy sauce)]

The liquid pressed from the fermented and matured moromi. Not available on the consumer market, it is produced as a key ingredient in the mixture method of soy sauce production.

[*Nama shoyu* (unpasteurized soy sauce)]

Similar to kiage, but this variety is packaged for sale after going through a non-heat sterilization process. It has mild taste and aroma, which is enhanced with cooking.

[*Kijoyu* (pure soy sauce)]

This is the only soy sauce variety allowed to use the word *ki* meaning 'pure' on its label, as designated by the Quality Labeling Standards. The term is used more generally by chefs to distinguish straight soy sauce from others seasoned with dashi or mirin, in the same way that a mixed vinegar sauce (*awasezu*) is distinguished from straight vinegar, or *kizu*.

[*Sashimi shoyu* (soy sauce for sashimi)]

Most soy sauce makers produce a soy sauce for sashimi according to their own preferences. Designed to go with the delicious fatty flavors of sashimi, sashimi shoyu are typically sweeter, viscous varieties of koikuchi shoyu, tamari shoyu, or saishikomi shoyu.

[*Dashi shoyu* (mixed stock and soy sauce seasonings)]

Kelp, dried bonito stock and other ingredients are added to create a well-balanced mixed stock and soy sauce product called dashi shoyu. Consumption has risen rapidly in recent years because of the versatility of the seasoning – suitable for both cooking and dipping. A variety from northern Japan known as *kanbu shoyu*, soy sauce with added kelp stock, is one example of a truly versatile seasoning sauce. Some others are popular as they have been tailored for one specific use, like pouring over a bowl of rice topped with raw egg or for dressing cubes of fresh tofu.

[Other soy sauce-based products]

Soy sauce can be found in countless products including dipping sauces, noodle soup bases, ponzu sauces, and salad dressings. Even among products sold as *shiro dashi*, white stock, some are seasoned soy sauces made from 100% wheat in the same method as shiro shoyu, while others are concentrated noodle soup liquids. In Akita and Yamagata, soy-based seasonings for universal use are simply referred to as 'soy sauce', even if they are blended products of soy sauce, stock and other seasonings.

Three Production Methods

Soy sauce is also classified into one of three production methods depending on whether amino acid liquid is added, and if so, what form that liquid takes. Amino acid liquid contains vegetable protein from the protein of soybeans or other grains it is based on, that has been broken down (hydrolyzed) either by acid, enzymes, or fermentation. The liquid itself became popular as a seasoning during the post-war period because it is filled with umami all resulting from natural raw materials, and it offered a cheaper method for changing the balance of umami in soy sauce.

Honjozo (regular fermenting method)

The base *shoyu koji*, made from soybeans and grains, is combined with either salt water or kiage (raw soy sauce) to create the moromi mash which is then fermented and matured. This method does not use amino acid liquid and accounts for approximately 80% of total soy sauce production volume. It should be noted that the honjozo label includes shoyu made in the traditional natural fermenting method (*tennen jozo*) as well as some varieties that have added seasonings to balance the flavor.

Kongo jozo (mixed fermenting method)

In this method, amino acid liquid is added to the moromi prior to fermentation and aging. Only breweries who make their own moromi make this variety of soy sauce, distinguishing it from the *kongo* method. The result is a soy sauce with very strong umami, so sugar and other sweeteners are added to balance the flavors and satisfy consumer taste preferences.

Kongo (mixture method)

The kongo method adds amino acid liquid to raw soy sauce (kiage). This variety uses added sweeteners to balance the flavor in the rich umami sauce, as with the mixed fermenting method. The base kiage is made by soy sauce cooperatives and the efficiency in this process means that individual soy sauce makers can produce umami-rich soy sauces at lower cost by just changing the balance of the amino acid liquid they add to the same base kiage.

Labeling Terminology

<Grade>

During the Edo period, soy sauces were ranked as finest quality, highest quality and next highest quality in ascending order. Currently, JAS and the Quality Labeling Standards classify soy sauce into three broad grades known as Standard (*hyojun*), Superior (*jokyu*), and Special (*tokkyu*). The Superior grade includes four varieties labeled with terms in kanji that indicate this superior quality – *josen*, *ginjo*, *yusen*, *yuryo*. Soy sauces in the Special grade carry labels with kanji meaning special, read as either *tokusei* or *tokugin*, and those that have a higher percentage of nitrogen can even earn the label of *tokusen* (selected) or *cho tokusen* (special selected).

<Salt Content>

The word *genen* meaning reduced salt can only be used to describe soy sauces with 9g or less of salt per 100g. Soy sauce makers can use the terms *usujio*, *asajio*, *amajio*, or *teien* when they wish to distinguish a lower sodium variety, as long as it contains less than 80% the volume of salt of its standard koikuchi or usukuchi counterpart.

<Raw Materials>

The labels of some products display the words *maru daizu shoyu* (whole soybeans soy sauce) to distinguish them from products using defatted soybeans. Terms such as "food additive-free" can only be applied when the soy sauces are free from all of the food additives prescribed by the Food Sanitation Law Enforcement Regulations. The use of the standalone term "no additives" is prohibited.

<Production Methods>

Tennen jozo (natural fermenting) can only be stated on a label when the soy sauce is made according to the regular fermenting method, not aided by any enzymes or food additives. To satisfy the conditions for using the label "handmade", a product has to be made in the natural fermenting process with everything from koji production to stirring of the moromi mash done by hand. If the soy sauce is prepared in wooden tubs, the term *kioko* can be added to the label, and in cases where the mash is prepared at a brewery, the name of that brewery can be included as well.

Ministry of Agriculture, Forestry and Fisheries: Quality Labeling Standard of Soy Sauce, September 13, 2004, Ministry of Agriculture, Forestry and Fisheries Notification No. 1704
http://www.caa.go.jp/foods/pdf/kijun_47_090831.pdf

Ministry of Agriculture, Forestry and Fisheries: Japan Agricultural Standards for Soy Sauce, September 13, 2004, Ministry of Agriculture, Forestry and Fisheries Notification No. 1703
http://www.maff.go.jp/j/jas/jas_kikaku/pdf/kikaku_soyou_151203.pdf

Soy Sauce Information Center (web site)

<https://www.soyssauce.or.jp/>

Kikkoman Corporation: all about soy sauce (web site)

<http://www.kikkoman.co.jp/soyworld/museum/>

Kyushu – Sweeter Soy Sauces

■ Oita Prefecture – Ryukyu

One of the most well-known soy sauce-based dishes from Oita is *ryukyu*. Fillets of fatty mackerel or yellowtail are marinated in a sweet soy sauce with green onions, ginger and ground sesame. Some say the dish gets its name from a dish made by fishermen in Okinawa, formerly known as Ryukyu, and that it came to Oita where large hauls of mackerel are brought in to port. Similar dishes exist all over the region and the common theme is that soy sauce helps reduce the pungent fishy smell. It is also called *gomasaba* (sesame mackerel) in Fukuoka and *atsumeshi* (hot rice dish) in Saeki, southern Oita, where locals top freshly cooked rice with the raw fish and pour tea over it heating just the surface of the fish. The addition of ginger differentiates this dish from a similar marinated tuna in the Kanto region because the proteolytic enzymes in ginger break down the surface just enough for the soy sauce flavors to infuse the fish.

In western Japan, particularly in Kagoshima, Ehime, Nagasaki, and Oita, yellowtail farming is thriving. One recent success story is *kabosu-buri*, whereby farmed yellowtail are fed a powder made from the citrus fruit *kabosu* (*Citrus sphaerocarpa*), a local speciality alongside other citrus fruits and *shiitake* mushrooms.

Oita has a mild climate, the largest number of hot springs and highest volume of hot spring water in Japan. This geothermal power is being harnessed to develop industries for fish farming as well as raising out-of-season crops.

Many of the local dishes feature citrus in some form, and soy sauce with citrus is clearly a well-loved flavor combination here. *Mizutaki*, a typical winter hot pot dish is served with grated radish, soy sauce, and the citrus fruit *yuzu*. In summer, locals enjoy refreshing cold *somen* noodles with a squeeze of *kabosu* juice. Sashimi is usually accompanied by sashimi joyu and fresh citrus or *yuzukosho* (paste of fresh chili peppers and yuzu zest) that can be mixed to make a spicy citrus soy sauce.



Ryukyu / Atsumeshi



Soy sauce for sashimi and ripe kabosu

◆ Regional cuisine fuses nature and society

Regional cuisines are typically based on available local ingredients, but can also be deeply influenced by distribution routes. One example is *tara-osa* from Hita City, Oita Prefecture, introduced by Dr. Ehara in Food Culture No. 25 (p.6). A staple at events such as the *Obon* summer festival when the spirits of ancestors return home, it is thought to have been introduced by a trader from Hakata in neighboring Fukuoka Prefecture, where it is called *tara-wata* (cod intestines). When

Bibliography

Nosan Gyoson Bunka Kyokai, Nihon no shokuseikatsu zennshu vol.44 Kikigaki Oita no shokuji, 1992

traders reached inland Hita, *bo-dara* (dried cod fillets) had already sold out and all that remained was the dried *tara-osa* (cod gills and innards). Even these parts were valued by the locals who had little access to seafood. They were combined with local flavorings to make a dish so popular it is embedded in local culture, passed down through generations and available in homes and supermarkets everywhere during *Obon*. The soy sauce used for *tara-osa* in Hita is said to be the sweetest of all varieties in Oita Prefecture where soy sauce is already considered very sweet.



Tara-osa (dried ingredient) and prepared dish of dried cod gills and innards with dried bamboo shoots

◆ Soy sauce in Oita Prefecture

Is Oita soy sauce really so sweet? “Aroma Kanto, Taste Kyushu” is the phrase often heard among local soy sauce producers, meaning soy sauces in Kanto are highly aromatic whereas those from Kyushu have great flavor. Most Oita-made soy sauces are produced by kongo jozo or kongo, so the key to the flavor is the amino acid liquid. Apparently sweeteners began to be added in the post-World War II period. The idea that *umai*, the word for delicious, actually means *amai* or sweet to locals here correlates with the results of analysis by Mr. Sasaki (p.4), which showed that the most popular soy sauces by sales in Kyushu tend to have a strong umami flavor along with rich sweetness. Perhaps this craving for sweetness came about as a response to food scarcity in the post-war period.

Another explanation may be that the people of Oita and more broadly Kyushu may be more accustomed to sweet flavors given their proximity to the traditional trading port of Nagasaki, where sugar has always been relatively easy to obtain. A fellow field researcher from Akita in northern Japan, upon drinking miso soup made from barley miso said “this is sweet too!” I was shocked as I have never once thought of miso soup as sweet. However, a 2014 Family Income and Expenditure Survey shows that expenditure on sugar is in fact higher in Kyushu than other areas. Located right along the sugar road leading from Nagasaki, it seems only natural therefore that the people of Hita City find their local dishes more delicious when cooked with sweeter soy sauce.

◆ Local tastes

Brewing has always been a major industry in Oita Prefecture. In 1948, of all the oita food industries, 117 were soy sauce producers, making up the largest group, followed by 103 dried sardine makers and 74 sake breweries. Administrative data from the Oita Local Specialty Support Division in 1956 shows the prefectural government encouraged agricultural cooperatives to establish soy sauce breweries to improve the farmers’ economy. Eight still make their own mash, while the others purchase *kiage* from one of two cooperatives as a base for their own original sauces. As each family’s tastes differ, local supermarkets have

to be sure to include a variety of local soy sauces to avoid complaints from customers.

■ Why are Kagoshima Soy Sauces Sweet?

In Kagoshima, local restaurants and dining rooms at inns frequented by tourists typically have two types of soy sauce available on tables: a “sweet” local brand and a “salty” variety from one of the leading manufacturers in Kanto.



Two varieties: “salty” and “sweet”

Everywhere in Kagoshima, you hear people saying “I don’t like Kanto-style soy sauce because of its salty taste.” Having grown up with the sweeter variety, they are not aware that the flavor is overwhelmingly sweet to outsiders, in the same way that they find soy sauces from Kanto far too salty. Where does the difference in flavor and the preference for those flavors come from?

Mr. Hidaka, factory director of the Kagoshima Prefecture cooperative of soy sauce producers contributed an opinion piece to a commemorative magazine entitled “Sweet Soy Sauces of Satsuma” (the former name of the region) on the occasion of the cooperative’s 70th anniversary. In a comparison of Kagoshima-made special grade koikuchi shoyu with a nationwide average of the same product category, the Kagoshima soy sauces were found, on average, to have higher levels of sweetness and umami components, less salt, and double the concentration of monosodium glutamate. These components create soy sauces that have less of a salty edge and instead taste sweeter and umami-rich. This sweet variety of soy sauce appears to have been first produced around 1955 shortly after post-war food controls were abolished in 1951. Mr. Hidaka’s article says producers wanted to differentiate their products from soy sauces in other prefectures. The locals loved it and the sweeter variety has become the standard in this region.

This same trend for producing milder soy sauce with a sweeter and more umami-rich flavor was probably experimented with around the country at the time but did not take root in the same way it did in Kagoshima. This suggests therefore, that local consumers have a distinct preference for sweet flavors in general. It may have always been this way – *Satsuma Fudoki* (records of local cultures) from the late Edo era describes all foods from the Satsuma region as sweet. It is not clear whether the preference for sweet flavors is owing to the warm climate or a background of sugarcane cultivation and sugar production. However, we do know that the preference for sweet comes through in the flavor of soy sauces popular in Kagoshima today.

◆ Soy sauce and miso flavors in local cuisine

We tried a large variety of local dishes in Kagoshima, including several in the Amami islands in the south of the prefecture. Seafood is prominent in the diet: farmed yellowtail as well as freshly caught sardines, bonito and *kibinago* (silver-stripe round herring), which ride up on the *Kuroshio* (Black Tide or Japan Current) and land on the northwest coast at Izumi and Akune. The sweet soy sauce was the perfect match for the deliciously fatty, so-

called ‘blue fish’ like yellowtail, mackerel, and sardines, and these dishes resembled Oita’s *ryukyu* introduced earlier. However, I really preferred Kanto-style soy sauce for fish with white or red flesh such as bonito and tuna. Interestingly, *kibinago* in Kagoshima is more typically served with vinegared miso than soy sauce.

Kagoshima is also known for its *kurobuta* Berkshire pork, which features in the diet here much the same as in Okinawa. *Tonkotsu* (braised pork ribs), a standard dish at local restaurants and in homes, is cooked for hours to soften the cartilage at the ends and then simmered to infuse the meat with flavors of barley miso, sugar, and *shochu* (distilled spirit made from sweet potatoes). The use of brown sugar results in a darker color and deeper flavor. *Tonsoku* (pig’s trotters) are enjoyed for the gelatinous parts around the foot bones. The dish takes two forms: a rich simmered dish seasoned with sugar and soy sauce, or a grilled dish whereby the boiled softened trotters are browned on a grill and served with vinegared soy sauce. In Amami, in contrast, people have traditionally seasoned these pork dishes with salt alone. Throughout the region, pork belly cubes are typically braised in soy sauce in a dish called *kakuni* in Kagoshima and *rafute* in Okinawa.

Looking at these similar dishes, we see that the standout in Kagoshima is the pork ribs, because the recipe includes miso. Looking deeper, there are many more examples of miso-flavored local dishes in Kagoshima including *satsuma-jiru* (miso-flavored chicken and vegetable soup), *hiya-jiru* (cold miso soup), and *satoimo-no-misoni* (taro simmered in miso).



Pig’s trotters simmered with the sweeter local soy sauce – a great match with *shochu*



Boiled and grilled pig’s trotters served with a refreshing vinegared soy sauce

The other surprising observation was the pale color of the noodle soup, flavored with *usukuchi shoyu* (see p.17). Typically, *udon* noodle soup is light in color, but we found this to be true even for *soba* noodle soup in Kagoshima. Similarly, the piping hot soup poured over a chicken rice dish called *keihan* from Amami is flavored almost entirely with salt and very little, if any, soy sauce. To summarize our survey of local Kagoshima dishes, we found that lighter soy sauce flavors are preferred and there are very few dishes with strong soy sauce flavor. In this region where a rice diet has traditionally been supplemented by sweet potatoes, perhaps dishes have evolved to be sweet to complement *shochu* rather than the rich and salty-sweet flavor that typically go well with rice and sake. This may explain the bigger role that barley miso and sweeter soy sauces play in the regional cuisine.



Soba noodle with *satsuma-age* (fried fish cake)



Keihan chicken rice, specialty of Amami

■ Sweet Soy Sauce Culture in Western Shikoku

Kochi Prefecture extends far from east to west, and according to Ms. Atsuko Matsuzaki, who presides over the Tosa Traditional Foods Study Group and cooperated in this research, there is a strong preference for sweet flavors especially in the Hata region of western Kochi. This idea is so entrenched that it even featured in the famous manga *Oishinbo* (literally “The Gourmet”, Chapter 87, Volume Kochi) in a scene set in the Shimanto River basin. An interview with a soy sauce producer in Nakamura City in central Hata revealed that when the company was established they started making sweet soy sauce to match local preferences. People here had grown accustomed to this variety distributed from Oita Prefecture and readily available on the market since the late 1920s. This company continues to brew a sweet kongo jozo soy sauce from its own mash today.

The distribution network of major food wholesalers developed early in Kochi Prefecture and national brand products quickly penetrated ordinary homes. Born and raised in Kochi City, I grew up with the taste of Kanto koikuchi shoyu, mistakenly thinking that was the standard. Only recently did I learn that each region of Kochi has its own unique soy sauce, popularized by local preferences.

This made me think, where is the line over which people find the soy sauce of other regions sweet? Our survey pointed us to Susaki, a well-known fishing town where the soy sauce producer makes a sweet soy sauce to meet local customers tastes in addition to the standard *umakuchi* umami-rich type. Today there are only eight soy sauce producers in Kochi, and while we cannot be certain of the reach of their distribution, we are inclined to describe Susaki as the boundary town in terms of sweet-type soy sauce production in Kochi.

In Ehime, as well, many people told us that soy sauces in the southern parts of the prefecture are sweet. Visiting soy sauce companies from Matsuyama in the north through Uwajima in the west and down to Ainan along the coast on the southern border, we found just one brewery in Uwajima making a sweet variety, whereas every producer in Ainan makes their own sweet type soy sauce. This suggests that Uwajima forms the boundary line for the preference for sweet in Ehime Prefecture.

Ehime produces a lot of wheat and has historically exported soy sauce to Kyushu from the port of Uwajima. Perhaps because they did not organize a cooperative, close to 50 producers continue to make soy sauce today, each with unique flavors. In this survey we travelled along the coastline of Ehime, and thus were unable to ascertain where the inland boundary line for sweet and salty preferences lies. It would be an interesting task to create a soy sauce flavor map based on tastings of every soy sauce currently made in the region.

■ Soy Sauce Cuisine in Ehime and Kochi

In 2007, The Ministry of Agriculture, Forestry and Fisheries (MAFF) showcased local Japanese cuisine by selecting one hundred dishes from agricultural, forest, and fishery villages around the country. Ehime’s

Uwajima-style *tai-meshi* (sea bream rice) was one of those chosen, and its main seasoning is soy sauce. Sea bream sashimi is marinated briefly in a raw egg and soy sauce-based mixture and placed on top of rice.

Roppo in Tsushima town is similar, though the fish is not limited to sea bream. It is a fisherman’s dish eaten at sea in which freshly cut fish is mixed with soy sauce, sugar, *mirin* (sweet rice wine), raw egg, sake, and sesame. All over Japan, fishermen exposed to the sea breeze are said to like sweet flavors to counteract the saltiness of tidewater that inevitably enters the mouth. The balanced sweet and umami flavors in the sweet type soy sauce are perfect for busy fisherman who can make a whole meal of soup, sashimi, and simmered dishes with just one bottle of seasoning.

Rice lightly flavored with soy sauce forms the base for *tai-meshi* in both Saijo and the seaside town of Mitsu in Ehime. In Ainan we found a regional dish called *tai-men* (sea bream noodles), in which simmered sea bream and slightly sweetened broth are served with somen noodles. The most typical Japanese dishes combine a staple food like rice or noodles with sea bream or other fresh fish and soy sauce, and this is seen very clearly in Ehime, especially on the coast.



Rice topped with sea bream sashimi marinated in soy sauce mixed with raw egg



Tai-meshi in Mitsu: the refined flavor of sea bream complements the rice lightly flavored with soy sauce

One of Kochi Prefecture’s most well-known dishes is *katsuo no tataki*, in which just the surface of a bonito fillet is grilled before being sliced and served with a vinegared soy sauce. As a large producer of yuzu, this citrus fruit juice is usually substituted for vinegar. And while *yuzuponzu* (a mixed sauce containing yuzu juice and soy sauce) is not a bad accompaniment to *katsuo no tataki*, locals like to use the round green citrus called *bushukan* from late spring through summer, when the bonito are migrating north. It goes without saying that local dishes have a strong seasonal element featuring available seasonal ingredients throughout the year.

Sukiyaki-style stew with sweet and salty soy sauce flavors is often found on the dining table in Kochi homes. The style resembles Kansai *sukiyaki*, in which a sugar and soy sauce mixture is poured directly on the meats being cooked. Because the sweetness is easily controlled by the amount of sugar added, little attention is paid to the type of soy sauce used.

People in Kochi like to drink. Many people feel that rich sugary tastes do not pair well with sake, so it can be said that people from Kochi, generally prefer salty flavors.



Seasonal sashimi topped with a squeeze of bushukan in summer and yuzu in winter.

■ Shodoshima and Kagawa

Soy sauce production began in earnest in the late 1700s on the island of Shodoshima, which had long been engaged in salt production. Its favorable location and regular shipping traffic facilitated both the procurement of ingredients as well as the export of finished products to nearby Kyoto and Osaka. Soy sauce producers in Shodoshima are well-known for the relatively high ratio of *kioke* (wooden tubs) used in production and storage. *Kioke* last 100 or even 200 years with proper maintenance, however, the craft is in danger as there are now very few artisans who know how to make and maintain them. Seeing the value of the craft, the island has commenced a project to pass on *kioke*-making skills to the next generation.

Known as a home of soy sauce, I was not surprised to that soy sauce plays a key role in flavoring local dishes. Shodoshima *oden* (hot pot of ingredients cooked in dashi) is quite dark in color having been simmered in a soy sauce-based soup, and many shops sell *tsukudani*, preserved foods cooked with soy sauce. Through a local post-war industrialization project, *tsukudani*, initially a home-cooked dish combining the bounties of the surrounding sea with abundant local soy sauce, was transformed into a local specialty. A proprietress of a local inn, originally from Tokushima, moved to Shodoshima upon her marriage and talks about her initial shock at the local foods: seasoned rice and even fish were cooked with soy sauce alone. Clearly the local people are accustomed to the deep color and saltiness of soy sauce.



Tsukudani in Shodoshima Simmered fish Shoyu mame

While the other prefectures of Shikoku frequently combine citrus with soy sauce, Kagawa, was notable for the absence of citrus. Even sashimi is served with soy sauce alone. This is another example of local tastes being driven by locally obtainable products.

Kagawa Prefecture rose to prominence nationally with its *Sanuki udon* (taking the ancient name of Kagawa), and promotes itself as the Udon Prefecture. The noodle soup is pale compared to soba soup in Kanto. Usukuchi soy sauce, here a kongo soy sauce, is indispensable to this udon soup recipe with its light color but strong umami. *Bukkake* is the most popular way to enjoy *Sanuki udon*, splashing the sauce directly over the noodles. Typically, the sauce combines soy sauce with stock, rounding off the sharp salty flavor and creating a mild sweetness with umami. A shift in preferences away from the straight soy sauce flavor to more umami-rich or sweeter seasonings can also be seen in a dish sold by udon noodle shops called *shoyu mame* (broad beans cooked in soy sauce). In an apparent answer to market needs, they now sell two types – sweet and salty.

■ Wakayama Soy Sauce Production

In the Genroku Era (1688–1704), soy sauce produced in the Kansai area was known as *kudari shoyu* in Edo (present-day Tokyo). The name indicates it was ‘soy

sauce brought down’ from the former imperial capital of Kyoto therefore having more sophisticated taste and flavor. Two key producing areas are Tatsuno in Hyogo Prefecture, well-known for usukuchi shoyu, and the town of Yuasa in Wakayama Prefecture famous for its *koikuchi* production.

The method from Yuasa served as a model for producers in Choshi, Chiba Prefecture, which later become a hub of soy sauce production in Kanto. The key to Yuasa soy sauces is sterilization in iron pots over burning red pines, resulting in a very dark color. The mash is aged in wooden tubs for at least one and a half years, and sometimes up to three years before pressing, thus the flavor is complex and concentrated. The signature brand from a well-known local producer takes a naturally brewed *koikuchi* soy sauce and adds sugar and mirin. With the saltiness toned down, the taste is not sweet but actually really well-balanced. Wakayama is a famous landing port for tuna, and when I tried this soy sauce, I found it was the perfect combination with sashimi of delicious fatty tuna.

All around Wakayama, the soy sauce is salty and dark, like Kanto. A local producer which started out as a ship broker took to loading its homemade soy sauce and miso as a gift to clients after offloading the inbound cargo. The clients were so pleased the company decided to switch its main business to soy sauce production. The raw materials of soybeans and wheat and the finished product soy sauce were all very heavy to carry by land but easily distributed by sea. As a neighbor to Osaka and with a long coastline sea route leading all the way to Edo, Wakayama took advantage of its location and developed into a major soy sauce producer.

When local people were asked about their regional dishes, after some consideration they said, “It has to be fish. The sashimi is delicious.” One recent trend in Yuasa is for restaurants to serve freshly caught *nama shirasu* (raw whitebait). For cooking purposes, there does not seem to be a fixation with a particular brand, however, the traditional naturally fermented local soy sauce is much loved by residents who use small amounts of the rich and expensive product as sashimi soy sauce.



Nama shirasu accompanied by plenty of soy sauce



Name miso dip



Kinzanji-miso

One dish found on the daily table in Wakayama homes is *name miso*, a miso dip made by processing the mash of miso and soy sauce. Many varieties exist, but the most famous is *Kinzanji miso*, whose history spans back to the early 13th century when the Buddhist high priest Hoto Kokushi shared the recipe on his return from China. These dips are a fine example of the local tastes in Wakayama, where miso and soy sauce producers are a familiar presence in daily life.

Chugoku and Kinki – Different Purpose, Different Soy Sauce

■ Shimane Prefecture – Recipes

Shimane Prefecture has historically been divided into three provinces: Izumo, Iwami, and Oki, each with their own unique landscapes. As a whole, Shimane sees plentiful rain and tends to be humid in both summer and winter. Typical Shimane dishes using soy sauce include *Izumo soba* (buckwheat noodle soup), *imoni* simmered potatoes, Shimizu's famous *shojin ryori* vegetarian cuisine, *iwanori zoni* (soup with rice cake and laver), and *yakuzen ryori* medicinal dishes. Locals have a culture called *hashima* in the morning and afternoon where they take tea accompanied by pickles and simmered dishes. Around Japan on May 5, people celebrate Children's Day by eating the celebratory dish *chimaki*. In the Shimane version, rice dumplings wrapped in bamboo leaves are topped with *kinako* (soybean powder) or sugar and soy sauce.

We spoke in detail to two women from Iwami Province, Ms. A (64 years old) and Ms. B (72 years old), who shared their recipes, for the most well-known hometown dishes using soy sauce.

◆ Kenchinjiru

A hearty winter dinner dish, Ms. A starts by simmering small cubes of tofu, shiitake, taro, carrots, burdock root, *konnyaku* (konjac or devil's tongue) and other tubers and vegetables in a dried sardine stock. She flavors the broth with salt, koikuchi shoyu and sake before thickening it with potato starch. Ms. B does not thicken the soup before serving.

◆ Simmered *nodoguro* (blackthroat seaperch)

Ms. A makes a mixture of water, soy sauce and sake, adds a touch of mirin or sugar and brings it to a boil. She then adds a whole cleaned and gutted *nodoguro* to simmer. She only started adding the sweetener recently. Ms. B adds mirin at the last moment. Both women also cook mackerel and flounder this way.

◆ Wariko soba

To make *wariko soba*, also called *Izumo soba*, locals place the whole buckwheat seeds in a stone mill to grind, which results in very dark and richly-flavored soba noodles. It is served in a stack of three round vermilion lacquerware bowls. Topped with condiments like green onions, seaweed, dried bonito flakes, and grated radish with chili pepper, the diner pours the sauce over to enjoy. Usually eaten at restaurants.



◆ Every family uses soy sauce differently

In interviews, one Shimane native shared the following with us: "local soy sauce is relatively sweet compared to Kanto, but not as sweet as Kyushu varieties. Recently people have been dipping sashimi in soy sauce and egg yolk". Ms. A's mother used to place a bulk order for local soy sauce for the whole town, distributing the bottles to each household. Her family has always used just koikuchi shoyu in all its cooking. In contrast, Ms. B's family has used Kanto shoyu since her mother's

Bibliography

Japan Society of Cookery Science (2014, 2015) *Japanese Home Cooking: Dishes to Hand Down to the Next Generation*. Research Committee for 2012-2013 and 2014 report on accounts from interviews.

FOOD CULTURE

generation (her mother is now in her 90s), switching between koikuchi for simmered dishes and usukuchi for dipping sauces and dressings. This shows clear differences in the way each family uses soy sauce.

■ Kyoto – Obanzai

Kyoto, with its many temples, is the birthplace of vegetarian *shojin ryori* as well as *kaiseki*, the sophisticated multi-course Japanese cuisine. The indispensable vegetarian ingredient is *konbu* – the kelp that yields delicious dashi that forms the centerpiece of the cuisine. The flavor is enhanced by usukuchi shoyu, born in Kansai in Tatsuno, Hyogo Prefecture during the late 1500s. Used in small amounts because of its higher salt content, usukuchi shoyu is preferred in Kyoto cuisine as it enhances the ingredients innate aromas and delicious taste whilst also showcasing the beautiful colors of foods, because aesthetics is just as important in Kyoto cuisine.

In Kyoto, home-cooked side dishes served with rice are called *obanzai*. In one popular *obanzai* dish called *yasai no taitan*, locally farmed root and leafy vegetables are simmered with deep-fried tofu in a broth of dried bonito, kelp and shiitake mushrooms seasoned with usukuchi shoyu. The seasoning is light and the taste comes from the vegetables themselves. The balance of flavor comes from clever combinations with fish like salted mackerel or dried herring at the dinner table. Highlighting the natural colors and innate flavors of ingredients are the keys to the delight in Kyoto cuisine.

◆ Switching soy sauces

Kyoto uses usukuchi shoyu in simmered dishes and *suimono* clear soups, but koikuchi in dipping sauces and *amedaki* (small fish cooked in a mixture of starch syrup, sugar and soy sauce). In our research in Mie, we met a woman in her 60s who had moved there from Kyoto upon her marriage. She found it hard at first because she could not find usukuchi shoyu in local shops in Mie. Nowadays, distribution networks have developed such that usukuchi shoyu can be purchased anywhere, and it is increasingly used in recipes for *suimono* all over Japan.

Yamabana Heihachi Chaya is a traditional restaurant that first opened its doors in Kyoto in the late 16th century. The proprietor told us that each generation has used different soy sauce in their cooking. His predecessor preferred lighter color and flavors, while the one prior to that leaned to darker colors and richer tastes. The current one finds himself somewhere in between. Preferences of the chef and clientele, as well as methods and seasonings all change over time, and yet some elements feel like they have never changed. That special feeling when you eat local hometown cuisine and the unique flavors at its core are what people love, and that will surely be passed on to the next generation.



Shimane – chirashi zushi served with egg yolk and soy sauce



Kyoto – suimono

■ Home of Soybean Miso

The most well-known dishes from this region using soy sauce include noodles like *Ise udon* and *kishimen*, as well as *hitsumabushi*, a dish of rice topped with sweet-glazed eel and enjoyed with various condiments. All these depend on tamari shoyu.

The warm climate, fertile Nobi Plains, and plentiful water from the Kiso River in this region have allowed for abundant harvests of rice, wheat, soybeans and vegetables since ancient times. Add to this the availability of good quality *aeba-jio* salt from Kira town in Okumikawa, Aichi Prefecture, and you have the perfect conditions for making fermented foods such as miso, tamari shoyu, vinegar, mirin, shiro shoyu and sake. Tamari shoyu, a byproduct of soybean miso production and specialty of Aichi, Mie, and Gifu Prefectures, is made from just soybeans, a small amount of wheat, salt and water. The mixture is naturally fermented and aged in cedar tubs for two years. This extended fermentation results in a deliciously mild full-bodied flavor that is dark in color owing to melanoidin released in the process.

Tokugawa Ieyasu, in his bid to become shogun of all of Japan, promoted soybean miso as the ideal provision for soldiers because it is non-perishable, portable and has excellent nutritional value. With ever-improving distribution channels to Edo and Osaka in this period, soybean miso production expanded rapidly. It was from this fortuitous combination of natural, economic and political factors that tamari shoyu was born in this region. Contrasting with the dark, viscous appearance of tamari shoyu is another Aichi Prefecture variety called shiro shoyu, or extra-light-colored soy sauce. Made predominantly in Hekinan City, this variety is preferred in dishes like *suimono*. The popularity of this product has spiked so significantly recently that supermarkets now stock a broad lineup of the even more convenient *shiro dashi shoyu* pre-made mixtures of dashi and shiro shoyu.

◆ Mie – Ise Udon

There is a passage in the mountain volume of the serial novel *Daibosatsu Toge*, written by Nakazato Kaizan from 1913 to 1941, that describes the udon at Doburoku restaurant: “white as snow, plump as a pearl, and eaten with ten drops of soy sauce black as ink”. He relates the locals saying that you should eat it before you die or you will be scolded by the King of Hell.

Originally a simple peasant dish, soft noodles made from wheat cultivated as a second crop were eaten simply with the surface liquid – tamari – that emerged during homemade miso production. The recipe was later changed to include dashi from shaved dried bonito and kelp, a tradition that continues today. Initially called

plain or common udon, the dish was officially named *Ise udon* in 1972 to differentiate it from other local udon styles. Doburoku restaurant burned down in 1903; the traditional-looking shop that stands in its place was completed about a decade later.

The sauce for Ise udon varies widely by restaurant, but the central ingredient is always tamari shoyu. You might find a sauce with just tamari shoyu or simply combined with dashi drawn from shaved bonito and dried anchovies. Others we found had much more involved recipes combining four shoyu varieties with an original stock made from shaved bonito and frigate tuna, Rishiri konbu, and three kinds of dried fish. The mixture in this latter recipe is finished with heated iron scraps, as well as granulated sugar and mirin for balanced flavor, before resting in the pot at room temperature.

Because the flavors can vary so much, locals stick to their favorite *Ise udon* restaurant. Despite the availability of noodles and dipping sauces in supermarkets these days, *Ise udon* is one dish that locals still want to eat out. A man in his 60s from Ise City told us that he used to bring his own rice to the restaurant and eat it with the sauce leftover from his udon. A woman in her 30s told us “Saturday lunch has always been *Ise udon*. To finish, we put a raw egg in the dipping sauce and enjoy the mixture with rice. It’s so delicious.” There is no end to the locals love for *Ise udon*.

Many other hometown dishes in Ise are also seasoned with tamari shoyu. *Tegone zushi* is vinegared rice topped with bonito and tamari shoyu served with condiments like ginger, green onions, and green *shiso* perilla leaves. *Sametare* is shark meat that has been marinated in a mixture including mirin then dried. It is a type of preserved food traditionally purchased by pilgrims to Ise Shrine during the Edo era as a souvenir of their journey. The prevalence of clams in the region from Kuwana to Yokkaichi led to the development of alternatives to ordinary grilled clams and thus a preserved dish called *shigure hamaguri* was born. This dish, in which clams are boiled in raw tamari soy sauce alone, gained fame for being served to Tokugawa Ieyasu at Ogaki Castle at the time of the decisive Battle of Sekigahara, after which he became shogun.

Tagane is a pounded rice cake made from a mixture of glutinous and non-glutinous rice. The thin dried pieces are dipped in tamari shoyu and grilled for serving. They have been a specialty of Kuwana town since the Meiji era when a man named Hamakichi started selling them in paper bags, rare packaging at the time.



Typical Mie dishes - Ise udon, tegone zushi and sametare

■ Aichi Prefecture – Kishimen (Red Soup or White Soup)

Kishimen is a dish of wide flat noodles in a dried bonito stock soup seasoned with tamari shoyu, and topped with deep-fried tofu, spinach, and dried bonito flakes. In *Tokaido Meishoki*, an Edo era guide book on the sights of the Tokaido road, it is described as a specialty of



Ise udon noodle soup differs by restaurant

Imokawa in Mikawa (traditional name for eastern Aichi), and is mentioned in the 1682 novel *Koshoku Ichidai Otoko* (Life of an Amorous Man) by Ihara Saikaku. A late 1700s article in *Morisada manko*, an encyclopedia of manners and customs, states that the dish is called *himokawa* in Edo, a mispronunciation of Imokawa where it originated, but is referred to as *kishimen* in Nagoya.

Kishimen, just like *Ise udon*, is a dish eaten out, whereas *miso nikomi udon*, a miso-based udon noodle soup dish, is typically made by locals at home. A man in his 70s from Inazawa City said “thirty years ago, we bought fresh noodles from neighborhood noodle-makers and cooked them at home for lunch.” A woman from Nagoya, also in her 70s said “when there was no rice, we ate *kishimen* for supper too.” She also told us that they made their own miso but bought shoyu in 1.8L bottles from a soy sauce maker nearby.

The soup for *kishimen* is much lighter than that of *Ise udon*, such that even locals, including a woman in her 40s from Nagoya, thought it contained koikuchi shoyu not tamari shoyu. There is a recent trend for serving *kishimen* in a soup so pale in color it is referred to as *shiro tsuyu*, or white soup. In contrast, traditional *kishimen* soup is called *aka tsuyu* (red or dark soup). Miya Kishimen, the famous restaurant at Atsuta Shrine in Nagoya calls their paler version *osumashi kishimen*, serving it with shredded konbu, delicate tofu skin called yuba, and slices of kamaboko processed fish cake.



Nagoya kishimen



Kishimen Red soup and white soup



Miya Kishimen restaurant, Atsuta Shrine

◆ Hitsumabushi

There are different theories as to the origin of the name of this distinctly Aichi dish, but it can most simply be understood as pieces of eel ‘placed’, described by the word *mabushi*, on top of rice in a round wooden box called *hitsu*. Locals grill eel with tamari shoyu and mirin and chop it to serve over rice. It is then enjoyed in three ways: first, as is; second, with condiments such as green onions, wasabi, and toasted laver; and finally with tea poured over it to make *ochazuke*. Atsuta Horaiken is the most famous *hitsumabushi* restaurant. Ever since its establishment in 1873, generations of owners have continuously maintained the same tamari shoyu and mirin mixture, basting eel with the sauce every day, slowly adding small amounts of the base ingredients as needed.



Hitsumabushi at Atsuta Horaiken



Moroko

◆ Moroko and Zakko-ni

Moroko is a homestyle dish in which small river fish like crucian carp and shrimp are simmered with tamari shoyu, sugar, mirin, and ginger. A similar dish called *zakko-ni* can be found in Ibaragi in the Kanto region. *Moroko* is enjoyed with rice or made into *moroko sushi*, in which vinegared rice is topped with the mixture and shredded omelette. The traditional New Year dish of *nishime*, simmered in a soy sauce mixture, is also made with tamari shoyu in this area.

◆ Shundeiru = delicious

A soy sauce maker in Ise, Mie Prefecture, told us that nowadays tamari shoyu is mainly used by restaurants, while locals generally buy koikuchi shoyu. Extracting tamari shoyu from miso in the traditional production method yields only 50 bottles from a whole cedar barrel. It is made just once every one or two years. When the previous batch of miso is used up, the brewers wait for the February cold season to come around before making a new batch, which is then allowed to ferment and age for one year. Ise-style soy sauces have rounded flavor compared to the sharper tastes often found in Kanto soy sauces. Cooking with Ise shoyu yields a very dark color in foods and for locals this is the sign of a tasty dish. In fact, the local word for delicious, *shundeiru*, literally means the ingredients are ‘well-soaked’ in soy sauce flavors.

A survey in Mie Prefecture in 2012–2013 found that until the early 1960s locals made both miso and soy sauce at home, but soy sauce was especially valuable. Traditional style tamari shoyu resulting from the handmade miso-making process was used regularly in homes in Mie. In contrast, during the same period, locals in Aichi Prefecture tended to buy their soy sauce from shops.

Even within this region with a strong tamari shoyu culture, there are clear preference differences between Mie and Aichi. In Mie, the udon soup is as black as ink and in *unaju* the bed of rice on which glazed eel rests is colored brown from the rich sauce. Contrast this with the soup of Aichi’s famous *kishimen*, which already quite light in the traditional *aka tsuyu*, takes on an even paler tone in the more recent *shiro tsuyu* version, and the clean white rice found under the eel in *hitsumabushi*.



Unaju, Mie Prefecture



Hitsumabushi, Aichi Prefecture

Soy Sauce and Cuisine in Hokuriku and Niigata

■ Ono Soy Sauce and Kaga Cuisine

The first thing you notice when you enter the town of Ono in Kanazawa City is the line of signboards adorned with the trademarks of soy sauce companies – you know you are in a soy sauce town. Ono has prospered as one of the five largest soy sauce production areas since the Edo period. While the style here is koikuchi, Ono soy sauces have a noticeably brighter tone than their counterparts in Yuasa or Shodoshima. Originally a celebratory meal to treat guests, regional Kaga Cuisine was developed by the

Bibliography

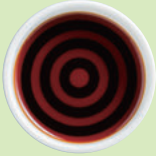
Chubu Region Institute for Social and Economic Research (2015), *Research report on the fermentation culture of the Chubu area*.

Color Variations in Soy Sauce

Comparing soy sauce by color, it is clear there is great variation even within the same category. Moreover, soy sauce from the same region or even the same company can vary in color based on different production methods, raw materials, and fermentation and aging periods. Below are some soy sauces from around Japan that demonstrate this broad color variation.

Koikuchi shoyu

The soy sauces in this category, sometimes referred to as dark colored soy sauce, are not always dark. The color varies from transparent brown to almost black, rendering the bottom of the dish invisible. The biggest factors in color determination here are the length of the fermentation and aging process and the pasteurization method.



Noda (Chiba) **Honjozo**



Ono (Ishikawa) **Kongo**



Shodoshima (Kagawa) **Tennen jozo**



Yuasa (Wakayama) **Tennen jozo**

Usukuchi shoyu

A key ingredient in the mixture and mixed fermenting method used to make usukuchi shoyu is amino acid liquid formulated especially for usukuchi varieties. The color of that base liquid and the proportion in which it is used determine the depth of color in the final product.



Tatsuno (Hyogo) **Honjozo**



Takamatsu (Kagawa) **Kongo jozo**



Usuki (Oita) **Kongo**



Noto (Ishikawa) **Kongo**

Tamari shoyu

All varieties of tamari shoyu are dark and viscous, rendering the bottom of the dish invisible.



Ise (Mie) **Honjozo**



Taketoyo (Aichi) **Honjozo**

Saishikomi shoyu

This variety of soy sauce typically takes on darker tones because kiage replaces salt water in the moromi preparation.



Uchiko (Ehime) **Honjozo**



Shodoshima (Kagawa) **Tennen jozo**

Shiro shoyu

Wheat is the main ingredient giving this variety its extremely light color.



Hekinan (Aichi) **Honjozo**

Soy Sauce-based Seasonings

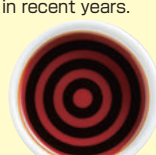
Soy sauce-based seasonings are very versatile as bases for simmered dishes or *suimono* clear soups. Among these, shiro dashi, an extremely light colored stock and soy sauce mixture, has gained a lot of popularity in recent years.



Nakanikawa (Toyama)
Soy sauce-based seasoning



Kagoshima (Kagoshima)
Processed soy sauce product



Daisen (Akita)
Versatile soup stock base

Lord of Kaga, one of richest feudal lords in Japan. Because the focus has always been on the delicious local ingredients, soy sauce is used only modestly. While still very much a treat in most of Japan, the culture of *wagashi* Japanese confectionary also grew rapidly in this region.

Thought it is often said that Hokuriku soy sauces are relatively sweet, we found Ono soy sauces to be umami-rich with mild saltiness, bringing out the best in the base ingredients. Restaurants of traditional Japanese cuisine have their soy sauces, especially those for sashimi and simmered dishes, made to order by local breweries.

Jibuni is the most well-known dish in Kaga Cuisine. Thin slices of duck meat coated in *kuzu* arrowroot starch are simmered in a rich flavorful broth, which gets thickened in the process. The duck is accompanied by *sudare-fu* (wheat gluten), a shiitake mushroom, and water dropwort. The dish has just the slightest flavor of soy sauce.

Ono soy sauce is said to have a mellow aroma giving it natural affinity to kelp stock, while soy sauces of Kanto have sharp, distinctive flavors



Jibuni style duck

which lend themselves better to bonito stock combinations. Soy sauce contains more than 300 kinds of complex fragrance components owing to the microorganisms used to brew it, such as koji mold and yeast. Local soy sauces develop unique flavors from the naturally occurring yeast found in breweries or high-quality yeasts cultivated from those original yeasts. An old document found in Ono describes the addition of rice koji to moromi in the process of soy sauce production. And the original recipe for usukuchi shoyu in Tatsuno called for the addition of *amazake*, the sweet fermented rice drink. While these methods are no longer used today, it is clear that such inventive ideas from early soy sauce brewers contributed to the development of unique local soy sauces.

◆ Noto Salt Farms and Fish Sauce

Noto Peninsula, jutting way out into the Sea of Japan, has long been a salt-producing region, with salt makers artificially flooding the salt farms that sit well above the high-tide mark. The area is also known for fish sauce called either *ishiru* or *ishiri*. It is made using sardines on the inland sea-side of Toyama Bay and squid in

Wajima City, exposed to the open sea. At sushi restaurants and local inns, sweet local soy sauce is placed alongside the sardine-based *ishiru*, said to be the more palatable variety for those unaccustomed to the intense flavor. “As you like” was the response when I asked which sauce I should use, but I found that a touch of *ishiru* was a great match for the naturally sweet squid and shrimp. A local dish of *ishiru*-simmered seafood and vegetables called *ka-yaki*, is very similar to a recipe found in Akita Prefecture, which also makes fish sauce, but under the name *shottsuru*.

Noto-area soy sauce is said to be sweeter, particularly around Wajima and Suzu. Perhaps this is to offset the salty sea breeze that blows in off the Sea of Japan. Supermarket shelves are lined with 1.8 liter plastic bottles of local soy sauces, and families in Wajima typically use this sweeter local variety for both cooking and sashimi.



Ka-yaki : squid simmered in fish sauce

Restaurants, however, select their sauces according to their tastes: at some you will find the local sweet type for dipping, while others will offer the less sweet Ono Soy sauces.

One very interesting observation was that chefs of *washoku* Japanese cuisine in Noto and Toyama, and in fact all over Japan, show a strong preference for national brand *koikuchi* and *usukuchi* soy sauces. Many of these chefs, having trained in Kansai, are accustomed to the taste and want to adhere faithfully to what they learned. They create the desired balanced flavor profiles by adding sugar, mirin and umami-rich dashi.

In contrast, a growing trend we saw among local families is a shift away from local soy sauce towards the use of single-bottle seasonings such as the stock and soy sauce mixture *dashi shoyu*, concentrated noodle soup liquids called *mentsuyu*, or other soy sauce-like seasonings. These varieties simplify food preparation because one bottle contains the balance of flavors and thus can be used to make dipping sauces, noodle soups, and all kinds of simmered dishes. In addition, health-conscious locals previously dedicated to hometown soy sauces are increasingly switching to low sodium alternatives. A key goal of this research was to classify the characteristic flavors of local soy sauces, but instead we witnessed what appears to be a nationwide trend towards more convenient and healthier foods.

■ Kelp and Sweet Soy Sauce in Coastal Toyama

Toyama Prefecture is by far the largest consumer of konbu kelp in Japan. Konbu is not only used for stock but also shredded and mixed with rice to make *onigiri* rice balls, cut into fine pieces for soups, and wrapped around smooth fish cakes to create *konbumaki kamaboko*. A wide variety is readily available including black, white, *natto konbu* (viscous sliced kelp), and kelp for *kobu-jime*, a method for preserving raw seafood by wrapping it. Even local convenience stores sell konbu-wrapped *onigiri* in addition to the more typical ones sold all over Japan prepared with *nori* (dried seaweed).



Onigiri wrapped in white tororo konbu



Kobu-jime sashimi platter

Kelp also acts as a seasoning, infusing umami and saltiness into foods wrapped in the shredded variety or raw fish and whelk stored between layers of the sheet kind. The latter preparation called *kobu-jime* draws moisture out of the seafood and infuses it with flavor. The resulting sashimi has a slightly sticky texture, and is rich in umami with mild salty flavor, eliminating the need for soy sauce.

A typical local dish in which soy sauce is indispensable is *buri daikon* (simmered yellowtail with *daikon* Japanese radish). Winter yellowtail caught in Himi Bay on route from north to south to spawn is said to be the most delicious in all of Japan. The *daikon*, simmered into a dark soy sauce color, absorbs the rich taste of yellowtail and is really delicious. Another popular local dish is a cod soup flavored with white miso. Thus, while konbu is the central flavor element in Toyama, we see it combined with either soy sauce or miso to create traditional hometown flavors.

Toyama has both sea and mountains. Along the coast line from Himi to Uozu, the soy sauces tend to be sweet. This type, initially favored among fisherman along the Toyama Bay coast, grew in popularity in the post-war period. Soy sauce makers adapted the sweetness and umami levels to consumers tastes, making this kind of mixed soy sauce an established favorite. In contrast, the mountainous regions of Toyama typically produce relatively salty, rich umami varieties. It seems that future surveys examining taste preferences for soy sauce across prefectures should also take a detailed look within each prefecture and the flavor variations between the coastal and mountain regions.



Buri daikon

Before visiting Toyama, my hypothesis for explaining the relatively sweet soy sauces found in the region was based on the availability of malt sugar. Toyama has been known since the Edo period for the medicine peddlers of *Ecchu-Toyama*. Drugstores used malt sugar in their medicated pastes, thus there was always a candy shop right nearby, supplying the malt sugar and making candies as a special gift for customers. However, my theory could not be verified, as the shopkeeper of the only candy shop left had not heard such a story and was not aware of any documents that may indicate such a connection.

■ Niigata Noppe-jiru and Home Cooking

Niigata prefecture, stretching far from north to south, exhibits cultural differences that result not only from its geographical features but also from the influence of neighboring prefectures. While the two bowls of the hometown favorite *noppe-jiru* I enjoyed at different restaurants in Niigata City both had light-colored clear broth and elegant flavor, homemade versions of this

simmered vegetable dish come in many forms. Some are flavored with salt alone or salt with just a few drops of soy sauce, while others are simmered in a relatively rich soy sauce soup.

Most locals I met in Niigata said that simmered dishes look much more delicious when they take on a dark brown color. These kinds of dishes are well-suited to the rice and sake preferred by residents of Niigata, which is one of the largest rice-producing regions in Japan. As winter approaches, *oden* can be found at convenient stores all over Japan. A Niigata local told me that at first she found the color of this *oden* soup so pale – the daikon looked totally unappetizing. But rather than the standard convenient store version getting darker to meet local preferences, it seems the locals have adapted to the lighter color, even lightening their own homemade simmered dishes, perhaps from a growing awareness of the need to reduce salt intake.



Noppe-jiru, a local Niigata dish

◆ Regional Niigata and soy sauce selection

I found an unusual dish in Nagaoka called *shoyu sekihan*. People all over Japan are familiar with the steamed sticky rice and *azuki* small red beans dish called *sekihan*.



Shoyu sekihan in Nagaoka

However, this version is unique as it is seasoned and colored with soy sauce and contains the somewhat larger *kintokimame*, similar to red kidney beans. The dish seems isolated to Nagaoka, so it would be interesting to understand its origins.

Many of Niigata's representative soy sauce brands come from long-standing breweries in Nagaoka. Niigata has always been heavily influenced by the Kanto region in terms of techniques, preferences, and ways of thinking, owing to a long and active trading relationship. However, we still see unique cultures in the south and along the prefectural boundaries, making it difficult to characterize Niigata under one cultural label. Such diversity seems to be reflected in the soy sauce selection at supermarkets in Sado, Niigata, and Nagaoka, where national brands are flanked by local brands and regional brands in all categories ranging from daily-use inexpensive ones to specialty varieties. The Itoi River basin is often regarded as the boundary of Japanese food culture between east and west and north and south. So I asked locals if there is a clear line for soy sauce preferences between Joetsu city and Toyama city, which sit on opposite sides of the river. What I heard is that the bigger difference is actually between the seaside and the mountains. This can be seen in the products of one soy sauce producer in Joetsu. The standard brand is an umami-rich variety, but the company continues production of the sweet and very sweet types of soy sauces especially for customers along the seaside.

Sado Island has a signature dish called *igoneri* or *egoneri*. A type of seaweed called *egoneri* is boiled then cooled to harden and eaten with soy sauce, served every

morning at local inns. Sado has traditionally had a strong miso-making industry, exporting to Hokkaido since the early 1900s. *Kitamae-bune* cargo ships travelling



Igoneri in Sado

east-west on the Japan Sea from the 17th century, called into Sado Island's Ryotsu Port rather than Niigata Port, distributing all kinds of commodities, including the raw materials for miso and soy sauce. But even here, most of the miso and soy sauce producers have disappeared, with just a few maintaining the traditional local flavors. One of the remaining soy sauce companies uses pre-roasted wheat to shorten the koji-making process, but continues to use a traditional pot to roast the wheat for their homemade amino-acid liquid. You can taste this faithful adherence to the manual process in their soy sauce. My taxi driver for the return trip happily told me that he sometimes sends that company's soy sauce to his daughter living in Tokyo because it's her favorite. Production of the umami-rich and sweet taste soy sauces first developed in the post-war period continues today because customers still love those flavors.

Now in the 21st century as we survey hometown and homemade dishes from all over Japan, we are surprised by the relatively high use of usukuchi shoyu. When most people made their own soy sauce, it was the dark-colored *koikuchi* or *tamari*, so if you wanted to achieve a lighter more elegant appearance in dishes, your only choice was to use less soy sauce or the transparent upper layer of a dissolved miso liquid called *sumashi* with salt to balance the flavors. Mirin, a popular nationwide sweetener now, was previously only used in homes in mirin-producing regions, and sugar was the mainstream sweetening ingredient. In the post-war era we witnessed the standardization of cookbooks and broadcast cooking programs as television sets came into homes nationwide. Cooking school teachers passed on their professional recipes to students using the same national brand soy sauce, be it usukuchi or *koikuchi*, that they had learned with.

While this standardization of tastes in cookery education might be a development in one sense, in another it may be responsible for altering and diluting distinctive regional tastes. This problem becomes clear when we attempt to record recipes for hometown dishes of Kyushu, which typically use local soy sauce even now. The same quantity of soy sauce will yield totally different levels of salty and sweet and an altogether different dish depending on whether you use the local sweet type *koikuchi* or a national brand *koikuchi*. In order to preserve regional flavors, we should be precise about the soy sauce variety to be used in a recipe and pass on the local tastes to the next generation.

Around Kanto – Koikuchi Shoyu

■ Gunma Prefecture – Okkirikomi

Examples of Gunma Prefecture dishes using soy sauce include *kenchinjiru* vegetable soup, *suiton* dumpling soup, *kanroni* sweet simmered fish, and *yubeshi*, rice-based confection. One particular favorite is *okkirikomi*:

fresh wide noodles cooked with seasonal vegetables and mushrooms. A 60-year-old man from Takasaki talked to us at length about his memories of this local dish. “In my childhood, I often helped make the noodles. Made from local wheat flour, the noodles take on a unique yellow color during boiling. We cooked them with *abura-age* (deep-fried tofu), green onions and daikon from my family’s field. The soup is based on dried anchovy stock seasoned with soy sauce, and because the fresh noodles still have the dusting flour on them, it gets really thick and delicious. Mom made a big pot in the evening and the leftovers were reheated the next morning. The noodles would soften, almost dissolving, soaking up all the soup in the process. Oh it is so delicious. My grandma’s handmade noodles were the best. She often made them for me when I visited her. *Okkirikomi* was a part of our daily life, served in homes and at neighborhood gatherings.”

Gunma Prefecture has traditionally thrived as a wheat-producing region, and popularization of the stone mill in the 18th century spawned a flour-eating culture. The name *okkirikomi* comes from the method, in which cuts (*kirikomi*) were made into the kneaded noodle dough still wrapped around the rolling pin and thrown straight into the pot. Unlike in the past, there are now so few professionals milling local wheat that there are limited opportunities for families to make their own noodles. The commercial products popular these days tend to have a very smooth texture. Traditionally, the noodles contain no salt and are not parboiled in water so all the dusting flour goes into the soup. A Takasaki City woman in her 60s explained “the whole family’s ingredients are cooked all together in one big pot, seasoned with salt, a little sugar, miso and soy sauce. The flavors get even more tasty when it is all reheated the next morning and we used to love adding rice to the remaining soup to make *ojiya* rice porridge.”

As shown above, some people described a mixture of miso and soy sauce, while others in our survey were astonished at the idea of adding miso. Clearly, they had grown up with a recipe of soy sauce alone. Though some told us they use dried bonito or kelp stock, the original recipe is based on a stock of dried anchovies. Irrespective of the exact flavors, locals cannot hold back a smile when they talk of *okkirikomi* because the name seems to conjure up fond memories of people surrounding a large pot. The dish is currently undergoing a revival, being promoted as a traditional regional dish through the “Gunma Prefecture Okkirikomi Project” which kicked off on April 1, 2013.



Gunma Okkirikomi Project



Okkirikomi

■ Chiba – Haba-zoni

Soy sauce manufacturing in Kanto began in the 1660s. Initially, in the late 17th and early 18th centuries, soy

Bibliography

National Cuisine Study Group, Hiiragikai (ed.) (1974), *Gunma Prefecture Regional Cuisine*.

Chiba Prefectural Boso Local Village Document Research Committee (1992), *1991 Chiba Prefectural Boso Local Village Document Research Report, Vol. 8*.

FOOD CULTURE

sauses from Kyoto and Osaka known as *kudari shoyu* were prized more highly, but gradually consumers in the city of Edo came to prefer the richer local Kanto-made soy sauces. Noda and Choshi cities in Chiba Prefecture offered the perfect conditions for soy sauce production, with plentiful raw materials of soybeans and wheat and rich waterways like the Tone River.

Local Chiba cuisine using soy sauce includes *zakko no tsukudani* (small fish simmered with soy sauce), *kanroni* of crucian carp (a New Year dish), roasted rice with soy sauce, and dishes using dried taro stem. One especially unique dish is *haba-zoni*. The key ingredient is *habanori*, also called *haba*, a kind of brown algae sometimes confused with *aosa*. It has a strong aroma of sea water and can be collected from early December through spring, but is especially soft during the coldest months. In a 1645 collection of haiku called *Kefukigusa*, *haba* is described as a specialty of Awa in southern Chiba. These days it is also found around Izu in Shizuoka Prefecture, but is very expensive at approximately 1,000 yen per sheet (18cm x 30cm).

I asked locals about the traditional recipe for *haba-zoni*. “These days we dry roast it in a fry pan, but traditionally we roasted *habanori* and *aonori* over charcoal in a *hibachi* brazier, gently rubbing it. Next, a richly flavored dashi is made from plenty of freshly shaved dried bonito (*katsuobushi*) and finished with soy sauce and salt. *Mochi* pounded rice cakes are boiled to soften and then placed in individual serving bowls with the soup poured over the top. A stack of boxes containing the roasted *habanori* and *katsuobushi* is placed on the table for each diner to add as they please.” Locals tell us that the preparation for *haba-zoni* is done by the men, giving women a rest for three days at New Year, when the dish is especially popular. The name has an auspicious ring because of the likeness of *haba* to *haburi*, meaning to exert influence and power. Men in this region also typically make *kanroni*, another important New Year dish. The key ingredient in this latter dish is sugar, and in the post-war years until about 1955, sugar was such a valuable item it was often presented as a New Year’s gift.

All around Japan, clear soups made with soy sauce are called *suimono*, but the locals in Chosei County of Chiba call it *shoyu jiru*, literally ‘soup with soy sauce’. Seasoned only with soy sauce and dried bonito dashi, it is quite dark in color. The qualities of *koikuchi shoyu* were clearly preferred in Chiba, which has been the largest producer of *koikuchi shoyu* since the Edo era. It seems this variety was best suited to the strong aromas of *katsuobushi* and *habanori*, naturally finding its place at the daily table here.



Chiba – *habanori* and *haba-zoni*
Cooperation: Chiba Traditional
Regional Cuisine Research Group
Chaired by Ms. Eiko Tatsuzaki
and Ms. Hiroko Ino



Tohoku and Hokkaido – Soy Sauce and Stock Mixtures

■ Akita Prefecture - Kiritanpo Nabe

Winter is extremely cold in Akita Prefecture, where damp freezing winds off the Sea of Japan bring sleet and snow. It is the third largest producer of rice, after Hokkaido and Niigata, and the flagship brand is Akita-komachi. *Kiritanpo nabe* is a specialty of Akita that highlights the best of local cuisine. Cooked rice is pressed around thick cedar skewers and grilled to make *tanpo*. These are then cut (*kiri*) into a hot pot, hence the name *kiritanpo*. The origin is thought to be deep in the north mountains around Kazuno where lumberjacks and hunters cooked the *tanpo* with the meat of pheasants and wild game, alongside wild vegetables foraged in the mountains.



These days, locals combine *kiritanpo* with chicken, burdock root, *maitake* mushrooms, the fine roots of water dropwort, green onions, and *shirataki* (transparent noodles made from *konjac*, or devil's tongue) to cook in a soup seasoned with soy sauce. A popular dish in the rice harvest season, it is also found whenever large groups gather, such as the New Year and the mid-summer festival of the dead, Obon. In homes, it is more common to find hot pots with a kind of kneaded rice called *damako* than *kiritanpo*. And many households make hot pots without any rice at all.

◆ Shottsuru Nabe and homemade fish sauce

Shottsuru is fermented fish sauce made from small fish like *hatahata* (sandfish) combined with salt and koji mold. It is used to season the soup in *shottsuru nabe* – a hot pot of *hatahata* and cod with tofu, Japanese leeks, and other vegetables. Because the shells of scallops, known as *kai* in Japanese, were often used instead of a pot, the dish is sometimes called *shottsuru ka-yaki* or simply *ka-yaki*, meaning shell-grilled. Historically, *shottsuru* has been made in fishermen's homes from the small fish that cannot go to market, thus it has never really been commercialized.

◆ Popular Sauce Mixtures

We heard from Akita natives that they use mixed stock and shoyu sauces not only in traditional cuisine but also in everyday home cooking. Historical documents from a local soy sauce brewery established in 1880 describe how in the beginning they peddled soy sauce by teaching locals how to use. A man in his 80s from Yurihonjo City told us that the most common seasoning had always been *shottsuru* made from sardines and tiny *koami* small shrimps, because miso and soy sauce were still so rare and expensive. This historical connection to rich fish flavors may explain the current popularity among locals of mixed stock and shoyu sauces.

■ Hokkaido – Genghis Khan, Dairy and Soy Sauce

All of Hokkaido sits in the subarctic zone, bringing extreme seasonal temperatures in summer and winter. It is also a humid climate, and the mass of land is covered in snow all through winter. The winter average

low temperature is less than -8°C , and it is not uncommon to see temperatures of -30°C . But the land and surrounding seas are rich making Hokkaido a key supplier of marine products like fish, shellfish and kelp; dairy products; meats such as pork, mutton and lamb; and vegetables like potatoes and pumpkins. Regional dishes featuring soy sauce include *Genghis Khan*, *zangi* (fried chicken), and *imomochi*.

Genghis Khan is a style of cooking mutton and lamb alongside vegetables on a special convex grill. The meat juices are used to heat the vegetables through and diners take pieces directly from the grill to enjoy as they cook. The meat may be marinated in a soy sauce-based seasoning, or not marinated, in which case it is often served with a dipping sauce. In the late 19th and early 20th centuries, in a method similar to beef hot pots, miso was often used to suppress the distinctive smell of mutton. With various advancements, the issue of smell has dissipated and most sauces now are based on soy sauce, with the addition of some miso, sugar, apple juice, ginger, garlic, or sesame oil. While there are products commercially available, *Genghis Khan* is a dish more typically enjoyed in the open air or at restaurants.

◆ Imomochi – soy sauce and butter

Hokkaido lagged the rest of Japan in developing the technology and know-how for rice cultivation. Thus, while mochi pounded rice cakes were being enjoyed all over the country, Hokkaido had to substitute glutinous rice with potatoes, available in abundance in the region. *Imomochi*, literally potato mochi, has become a mainstay of Hokkaido cuisine, often featured on the menu of school lunches. Boiled or steamed potatoes are mashed and then kneaded with potato starch to make small dumpling-like cakes which are then sautéed until golden brown. Seasoned in salty-sweet flavors, or dipped in soy sauce, butter or sugar, this is a simple and delicious dish frequently found in homes around Hokkaido. Highly versatile, they can also be deep-fried or added to soups, and supermarkets now stock frozen *imomochi* and variations with cheese. Typical recipes contain only potato starch, but the local tip is to use equal parts flour and potato starch to achieve an even better texture.

One of the most popular flavor combinations in Hokkaido is soy sauce and butter. You can find it on grilled corn and scallops, in convenience store *onigiri* and in all kinds of snack foods. A woman from Sapporo city in her 70s said, “when I was a child, butter was a precious commodity, but we used to put a dab of butter on hot rice and just as it melted add a few drops of soy sauce. I could eat bowl after bowl of that rice” – evidence that this delicious combination is not a new trend.

Konbu kelp is eaten on a daily basis in areas like Kushiro where it is farmed, but rarely consumed in non-producing areas like Sapporo. Many people in these latter areas told us they will use a konbu stock and soy sauce mixture if it's there but are not all that particular about it.

Bibliography

Anbaiko (2007), *Thoughts on Akita's Food Culture*, Mumyosha Shuppan.

Japan Society of Cookery Science (2016) *Japanese Home Cooking: Dishes to Hand Down to the Next Generation*. Research Committee for 2014 report on accounts from interviews.

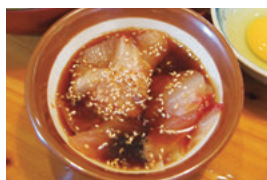
Quintessential Local Ingredients

Local cuisine is typically based on readily available homegrown ingredients. Often these products are combined with local soy sauce to create the flavors that characterize the region. In Hokkaido, where dairy farming flourishes, soy sauce is regularly combined with butter. In Kyoto, usukuchi shoyu enhances the flavors of the ingredients themselves in simmered dishes. Soy sauce in the citrus-growing regions of Shikoku is frequently accented with the juice of seasonal citrus fruit.

A survey on home cooking from 1920s already showed the use of soy sauce as a standalone ingredient as well as in combinations with sugar, vinegar and other seasonings. A firmly established element in Japanese cuisine, this utility seasoning can play either a leading role or a supporting role. Here we introduce some regional dishes that best demonstrate this practice of pairing distinctive regional ingredients with soy sauce.

Fresh seafood marinated in soy sauce

Fresh seafood, delicious with salt alone, takes on a deeper flavor with the addition of soy sauce. The salty edge can be mellowed if the soy sauce-based marinade contains just the right amount of sweetness. In coastal areas around Japan, and in much of Kyushu, the typically sweeter local soy sauces are often used straight.



3 Uwajima tai-meshi (Ehime)
Sea bream sashimi is briefly marinated in a mild mixture of soy sauce, mirin, and sugar, before being served on top of hot rice.



4 Hotaruika no okizuke (Toyama)
Firefly squid are marinated in soy sauce, in this simple dish typically prepared by fisherman at sea.

Soy sauce the leading role in rich simmered dishes

Variations of the salty-sweet *tsukudani* of small fish and shellfish are popular on coasts and islands where the ingredients are found in abundance. While the depth of color and combination of seasonings differs by region, soy sauce-simmered fish dishes (*nitsuke*) are found all around Japan. Shoyu-mame from Kagawa seems an obvious dish from a region that has a long history of soy sauce production.



7 Asari no tsukudani (Tokyo)
Tsukudani preserved foods, this one containing clams, are thought to have been first created by the fishermen from Settsu, Osaka who made their home on Tokyo's Tsukuda Island during the Edo era.



8 Shoyu-mame (Kagawa)
A quintessential Kagawa dish, fava beans simmered in soy sauce are a popular souvenir.



9 Sakana no nitsuke (Shodoshima Island, Kagawa)
Simmered fish exists nationwide, but this version from Shodoshima, the home of soy sauce, is unique in that its only seasoning is soy sauce.

Butter and soy sauce: a perfect match

The irresistible aroma of butter and soy sauce on the grill – you know it's Hokkaido!



1 Grilled corn (Hokkaido)
Hokkaido, with its extreme temperature ranges, produces deliciously sweet corn that pairs perfectly with butter and soy sauce.



2 Imomochi (Hokkaido)
Steamed potatoes are kneaded with potato starch to make potato mochi cakes, which are sautéed until golden brown. A popular school lunch menu.

Standard simmered dishes: dried foods in soy sauce

In areas that experience heavy winter snowfalls, such as Iwate and Niigata, the locals have developed various ways to preserve vegetables for year-round consumption. For example, daikon may be dried in strips to make *kiriboshi daikon*, or cut in blocks and boiled before drying outside in the freezing temperatures to create *shimi daikon*. In addition to dried shiitake mushrooms and *hijiki* dried seaweed, these ingredients regularly feature in simmered dishes all around Japan, invariably flavored with soy sauce. The simplicity of these dishes enables us to get a strong sense of the flavors of a family or local region.



5 Hoshi-shiitake no umami (Oita)
Oita is the largest producer of dried shiitake in Japan (48% by volume). Simmered in soy sauce and sugar, this dish is a staple at special occasions like Obon and New Year.



6 Shimi-daikon no nimono (Iwate)
Thick rounds of the daikon, which have been through several iterations of freezing overnight and drying in the daytime, are simmered in soy sauce and dashi giving them a truly unique texture.

Soy sauce in a supporting role enhancing umami

In Kansai, usukuchi shoyu is preferred in simmered dishes because it highlights the characteristic flavors of the ingredients themselves. Seasoned cooked rice also draws its flavors from the ingredients within in addition to liquid stock, but it is soy sauce that affects the balance of flavor and depth of color.



10 Kyo-yasai no nimono (Kyoto)
Kyoto-grown vegetables like pumpkin, winter melon and shrimp-shaped taro are simmered with deep-fried tofu in dashi stock seasoned with usukuchi shoyu for lighter color.



11 Saijo-fu tai-meshi (Ehime)
Rice and sea bream are cooked in a delicate balance of soy sauce and sake to remove fishy aromas without overwhelming the pleasant flavor of the fish itself.

Soy sauces for dipping and dressing – a touch of citrus or vinegar

Highly acidic citrus fruits such as yuzu, sudachi, and kabosu are found in abundance in Kochi, Tokushima, and Oita, where the juice is often squeezed over sashimi before dipping in soy sauce. The delicious combination of soy sauce and citrus juice is known as *ponzu*, and standard varieties are made with the succulent *daidai* bitter orange. Vinegared soy sauce in differing proportions, called *nibaizu* and *sanbaizu*, is also found in a variety of dishes.



12 Kabosu and sashimi (Oita)
Locals say that kabosuburi goes best with kabosu juice and the local sweet style soy sauce.



13 Bushukan and bonito (Kochi)
Citrus fruits like yuzu, bushukan, naoshichi, and sudachi, typically accompany sashimi in Kochi, where bonito is a specialty.



14 Sudachi and sashimi (Tokushima)
In Tokushima, the local specialty citrus sudachi accompanies all kinds of dishes in addition to sashimi.



15 Nama-gaki (Hiroshima)
Local raw oysters are served with either ponzu or soy sauce with a touch of vinegar.



16 Tonsoku no sujoyu-gake (Kagoshima)
The sour taste of vinegared soy sauce lifts and lightens this dish of plump and gelatinous pig's trotters.

in Soy Sauce Combinations

Soy sauce a must in traditional meat dishes

Meat dishes are greatly enhanced by soy sauce. An essential in braised pork dishes, we also found *sukiyaki*-style salty-sweet meat dishes of beef, chicken and pork flavored with soy sauce all over Japan. When people are asked for examples of home cooking, the first response is invariably *nikujaga*, a simmered dish of meat and potatoes delicious with rice. It is typically made with beef in Kansai but often pork in Kanto, and while the meat may differ by region or family, the key to the seasoning is always soy sauce.

Some hot-pot soups may be flavored with soy sauce before serving, while with others like *mizutaki*, each diner dips their cooked ingredients into ponzu soy sauce just before eating. Grilled meats such as *Genghis Khan* barbecued lamb taste great in soy sauce with condiments like garlic and ginger.



17 Genghis Khan (Hokkaido)

Barbecued lamb and mutton. Mutton became part of the Japanese diet in the late 1800s. Originally flavored with miso, soy sauce is now the standard. The meat is either marinated first or grilled fresh and served with dipping sauce.



18 Hinai-dori no Kiritanpo Nabe (Akita)

Stock made from free-range Hinai chicken is seasoned with soy sauce and mirin. The resulting soup, together with the Kiritanpo (grilled skewers of rice, maitake mushrooms, burdock root and the fine roots of water dropwort that are cooked in it, is delicious beyond expression.



19 Kanto no Sukiyaki (Tokyo)

In the Kanto version of this dish, meat is simmered in a soy sauce and mirin mixture called *warishita*, while in Kansai sugar and soy sauce are sprinkled directly over the beef while it is cooking.



20 Buta no Kakuni (Amami, Kagoshima)

On the brown sugar-producing island of Amami, brown sugar is often used in recipes with soy sauce to achieve salty-sweet flavor, such as in this dish of braised pork cubes.



21 Tonsoku (Kagoshima)

Pigs' trotters are stewed until soft in the local sweet type soy sauce and shochu liquor. Some recipes also call for the addition of sugar.

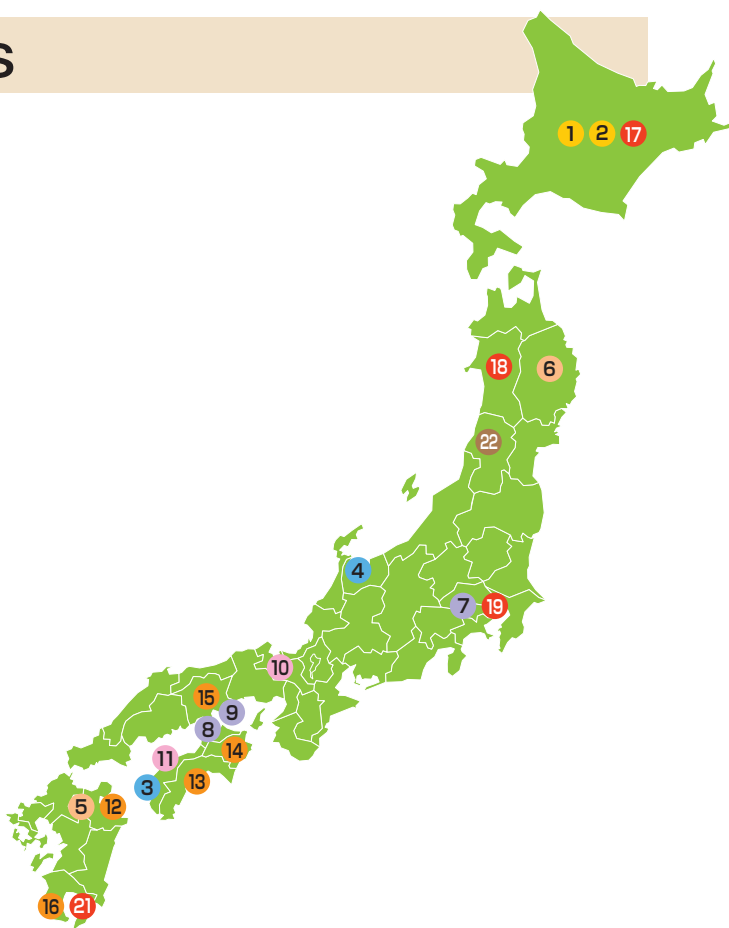
Yamagata Imo-ni: soy sauce and miso variations

In Yamagata Prefecture, there is a culture of gathering outdoors around a huge pot of stewing meat and taro called *Imo-ni Kai*. While every recipe contains *sato-imo* (taro), locals in inland regions gather on the riverbanks to enjoy beef soup flavored with soy sauce, while in the seaside area of Shonai, the typical recipe is for pork cooked in miso. It is interesting that even within the same prefecture the meat and seasoning for the same dish are so different.



22 Shoyu-aji no Imo-ni (Yamagata)

As autumn sets in, locals look forward to the Imo-ni Kai gatherings held at the riverside, so they can enjoy the traditional soy sauce-flavored soup with meat and taro.

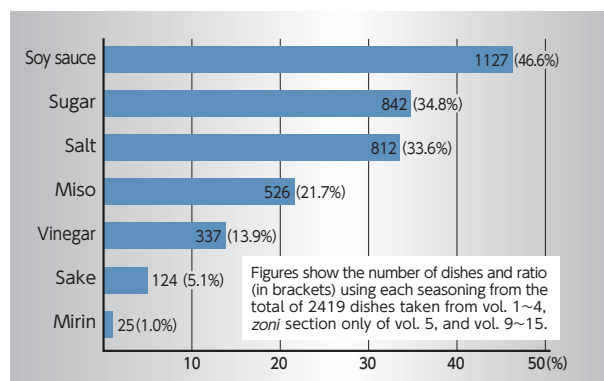


20

Flavors of Home Cooking from 90 Years Ago

We examined the types of seasoning used in a total of 2419 home cooking recipes from the 1920s and 30s from all over Japan. The rice dishes, noodles, soups and hot-pots, side dishes, and pickles recipes were taken from *Furusato no Katei Ryori* (The Complete Collection of Hometown Cooking; *Nobunkyo*). To introduce salty flavors, dishes most frequently used soy sauce, salt, and miso (in descending order); while sweetness was added with sugar, and very rarely mirin.

Soy sauce was found standalone in several cases, but more often in combination with sugar, vinegar, and other seasonings. There are some interesting examples where the same dish was flavored with miso for everyday dining, but cooked with soy sauce for special events. Going forward, we would like to examine more thoroughly the nature of homemade dishes and the seasonings they used nearly one hundred years ago.



Seasoning Usage Rates as seen in *Furusato no Katei Ryori* (Complete Collection)

A Tour of Japanese Noodle Dishes with Soy Sauce-based Soups

Noodles such as soba, udon, and somen are popular nationwide and take different forms depending on the region. The soup often contains soy sauce, giving us an insight into local soy sauce flavor preferences. While some people are surprised by the dark color of noodle soup in Kanto, others find the Kyushu varieties extremely light in color. Here we introduce some typical noodles from around Japan.

1 Niigata *Hegi Soba*



A mixture of buckwheat and *funori* (a kind of seaweed) are kneaded together to make these noodles, known for their slippery smooth surface. Generally eaten cold with a dipping sauce, can also be served hot in a bowl of soup.

2 Akita *Inaniwa Udon*



Dried handmade udon noodles were first made during the Edo era in the northern provinces of Japan. Initially intended as a preserved food, production expanded when the noodle-maker became a purveyor to the feudal lord and later to the imperial household. Typically eaten cold with dipping sauce.

13 Shimane *Wariko Soba*



Buckwheat noodles are served in *wariko* - nested round red lacquerware boxes. Condiments such as *momiji oroshi* (grated daikon with red chili pepper) are placed on top before pouring a soy sauce-based soup over the noodles.

12 Fukuoka *Hakata Udon*



Soft, low-density udon noodles are served in a soup of dried anchovy, flying fish and kelp stock flavored with usukuchi shoyu.

11 Kagoshima *Shiru Soba*



Noodles served in a bowl of lightly-colored soup, typically flavored with locally produced usukuchi shoyu.

10 Tokushima *Handa Somen*

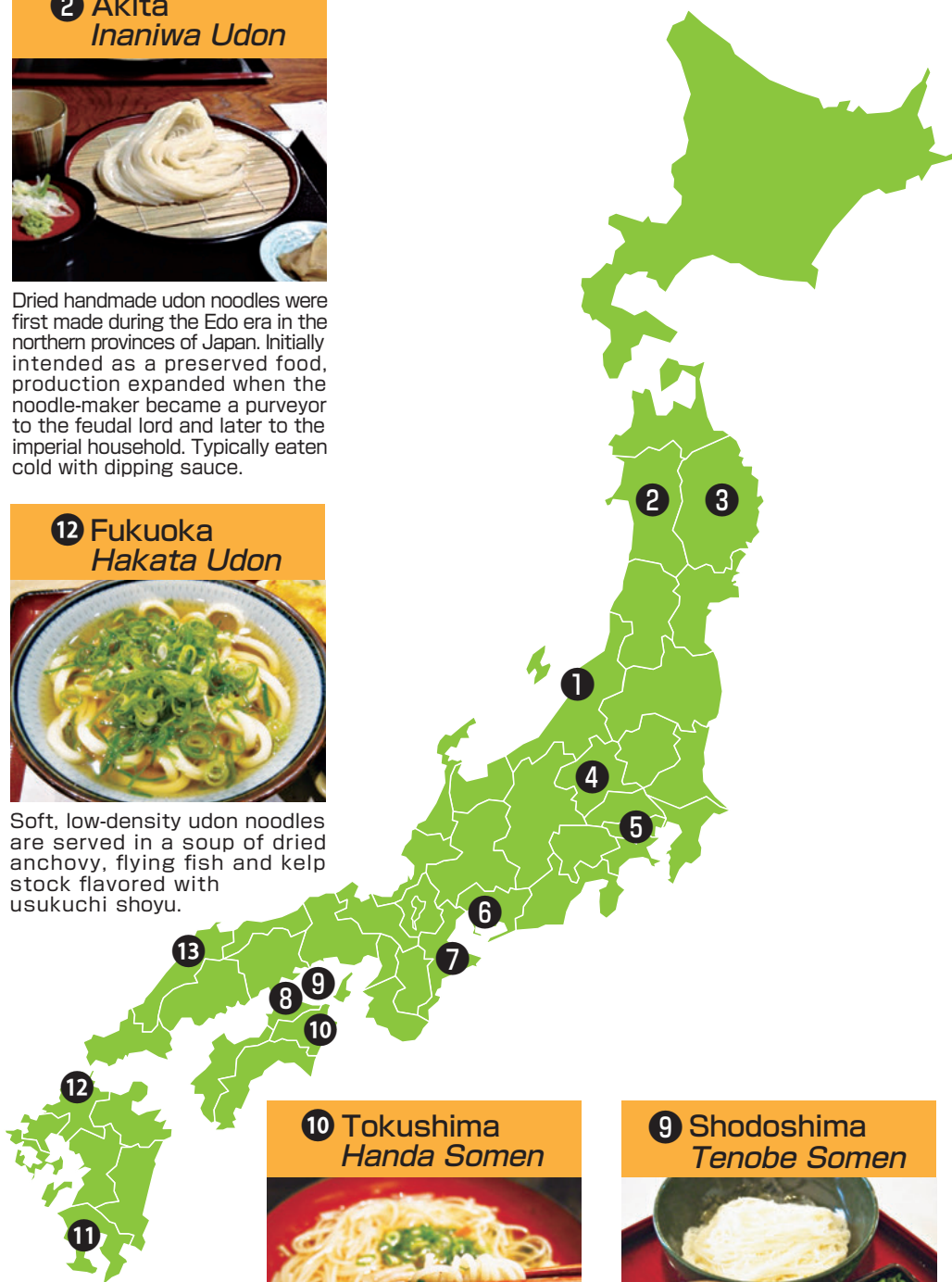


The current trend for when these are served as hot soup noodles is to use usukuchi shoyu in the soup, to achieve delicate color and flavor.

9 Shodoshima *Tenobe Somen*



Cold, thin somen noodles are eaten with a clean salty soy sauce-based dipping sauce.



3 Iwate Wanko Soba



Mouthfuls of noodles in a hot soy sauce soup are added to your bowl one at a time by the server.

4 Gunma Okkirikomi



Fresh wide flat noodles are stewed with seasonal vegetables and mushrooms. Locals insist the stew tastes best the second day when the starchy noodles have thickened the soup.

5 Tokyo (Edo) Kake Soba



The soup gets its dark color and full flavor from koikuchi soy sauce and rich dashi made from a mixture of dried fish, including bonito, mackerel and *sodagatsuo* known as frigate or bullet tuna.

6 Nagoya Kishimen



A traditional commoners dish from Owari, the historical name for Aichi Prefecture. Flat noodles in a soup typically made with tamari soy sauce are topped with deep-fried tofu, dried bonito, and boiled leafy green vegetables.

8 Kagawa Sanuki Udon (Bukkake)



Straight soy sauce or a dashi and soy sauce mixture are splashed over thick al dente noodles just before eating. The name comes from the verb *bukkakeru* meaning 'to splash'.

7 Mie Ise Udon



Soft thick noodles are combined with a deep-colored thick sauce based on tamari shoyu and a modest amount of salt.

Conclusion

This study sought to ascertain regional preferences in soy sauces through an examination of local dishes thought to reflect the food culture of each region. We tried to understand the preferences by looking at geographical, historical, and cultural differences.

Taste preferences and consumer choices are becoming more standardized around Japan as seen in the boom in low sodium products among a health conscious population and the development of better packaging to maintain freshness. On the other hand, there is a movement to market local products as a regional brand. This is especially notable in *gotochi gurume*, local gourmet cuisine. At an annual festival called the B1 Grand Prix, dishes from around Japan compete to find the ultimate local food. The movement has inspired the revival of traditional regional dishes and invention of new foods using local ingredients.

Many typical local dishes come from home cooking. Therefore, it was not surprising in our field surveys to find the same dish with many different recipes and alternative seasonings. Even dishes from my hometown that I have eaten all my life tasted so different when I ate them at local restaurants. It was that same kind of discomfort I feel when I eat Japanese cuisine abroad. The feeling is particularly strong when the flavor of the soy sauce is the central element, such as with the dish *ryukyu* (see p.10).

Another example is *Ise Udon*, for which every local has their favorite soy sauce brand. The master at a local soy sauce brewery was happy to report that a customer had once said "if it's not your soy sauce, I can't eat it". Another soy sauce producer said "I can change the miso blend without any comments, but as soon as I change the soy sauce the customers are on to me". Mothers talk about sending the local soy sauce to their daughters in Tokyo. However, a 1930 document published in Mie Prefecture reported "tamari is loved by locals, but perhaps hard to take for people in other prefectures". Such examples suggest that there is something distinctive about local soy sauces that means they are really only agreeable to those who have used them for many years.

While continuing to hand down traditional flavors, local soy sauce producers are developing soy sauce variations in response to modern consumer needs. People want to simplify food preparation, so dashi shoyu mixtures of soy sauce and stock are especially popular as are the special single purpose soy sauces, like the one for raw egg on rice. Add to that the spread of online shopping and what we are seeing is that anyone anywhere in Japan can enjoy their favorite distinctive local soy sauce brand. With progressing globalization, more and more people from around the world are drawn to Japanese food culture. Some visitors come specifically to enjoy certain regional cuisines. Rather than Japanese food being a large single entity, we are seeing a growing role for specific regional cuisines. This survey showed us that local soy sauces do indeed play a unique role in building the flavors of hometown cooking. We also saw that while there is rich diversity in regional cuisines, they are constantly changing. We conclude, therefore, that this research should be continued, delving ever more deeply and expanding to cover more areas.