The 2007 Kikkoman International Food Culture Seminar was held on October 12. Mr. Hirotaka Matsumoto, sushi restaurant owner, food culture expert, and author of “The World’s Thriving Sushi Business” articles in previous issues of FOOD CULTURE, presented a lecture titled, "The Internationalization of Sushi.” The following is a summary of this lecture, which reports on Mr. Matsumoto's visits to sushi restaurants in over thirty countries.

The Sushi Police are Coming!

In the spring of 2007, a rumor emerged worldwide that the sushi police were coming. This rumor began with an attempt by the Japanese government to establish a system for authorizing and certifying Japanese restaurants worldwide. Meeting with intense objection throughout the world, these attempts were withdrawn, yet discussion on adopting a recommendation system continues. The primary goal of establishing such a system seems to be to increase Japan's exports of agricultural, marine, and processed food products throughout the world by accrediting the restaurants that would function as regional bases for these exports.

According to the Japanese Ministry of Agriculture, Forestry and Fisheries, there are roughly 10,000 restaurants serving Japanese food in North America, 1,500 in Latin America, between 6,000 and 8,000 in Asia, between 500 and 1,000 in Australia, New Zealand, and other regions of Oceania, 100 in the Middle East, 2,000 in Europe, and 500 in Russia. These data, however, are not complete as some figures are not included, such as the thirty restaurants serving Japanese food in Johannesburg and Cape Town, South Africa.

It is difficult to tell whether these figures include restaurants run by Chinese or Korean owners (photo ①), or whether ramen shops are included. Of the 20,000 to 23,000 restaurants serving Japanese food throughout the world, currently the only way to determine the number serving sushi is from a somewhat outdated 1990 survey conducted in the United States. This survey reports that roughly sixty-six percent of the Japanese restaurants in all of North America serve sushi. However, as sushi has become so popular in recent years, it seems likely that this figure is closer to seventy or eighty percent. Using this as a base, the number of restaurants serving sushi outside of Japan, including those with a sushi bar that also serves other dishes, must range from around 14,000 to 18,000. The number of sushi restaurants in Japan is estimated at roughly 45,000.

The sushi shown in photo ③ is that served by the Takezushi restaurant in Belgium, of which I am co-owner. Let’s take a look at the origins of sushi ingredients, including soy sauce. First, Takezushi uses Kikkoman soy sauce. The country in which Kikkoman soy sauce is produced is noted on bottles in the language of that country. Kikkoman currently has facto-
ries in six countries. Soy sauce has been imported from the Netherlands to Belgium since the Netherlands factory opened in the fall of 1997. Previously, soy sauce was imported from a factory in Singapore. Photo 2 is a picture of Kikkoman soy sauce sold in ordinary stores offering Japanese foods, with the fourth line from the bottom indicating, in Dutch, that the soy sauce was made in the Netherlands.

The sushi vinegar used at Takezushi is produced by Mizkan, and the bottles note that they are products of the U.K. Gari, or pickled ginger, is consigned by Kanefuku of Japan and grown in China for export to other countries. Nori, or seaweed, is also a product of China, consigned by Yamamotoyama. The wasabi (Japanese horseradish) used at Takezushi is a powdered type, surprisingly, made in the U.S.A.

Photo 3 shows sushi made with such ingredients as toro (fatty tuna), maguro (bluefin tuna), and Japanese sea bass. Belgian fish merchants purchase the fish at the Rungis wholesale market outside of Paris, which, since the establishment of the European Union, is possible on an almost daily basis. Toro and maguro come from the Mediterranean Sea; ikura (salmon roe), surf clams, and Alaskan pink shrimp come from Canada; sea urchin comes from Norway; and Japanese conger comes from South Korea. When Japanese conger is not available, Belgian eel boiled in a sweet sauce, or frozen broiled eel from China, is used. Somewhat surprisingly, none of the ingredients come from Japan. It seems entirely possible that a major force behind the popularity of sushi throughout the world is the availability of ingredients all over the world.

Rice is the next imperative in sushi. The first overseas sushi boom occurred in the U.S. This is probably due to the ready availability of California rice, which allowed restaurants to offer reasonably priced sushi. Had it been necessary to import rice from Japan, the prices would likely have been five to ten times higher.

Californians began growing rice around the middle of the 19th century, during the San Francisco gold rush. The diet of the many Chinese immigrants who came to mine gold or to work on construction of the Transcontinental Railroad depended on rice, which, at that time, was imported from China. One local farmer decided that rice produced in the U.S. would be a lucrative crop and the rest, as they say, is history. A long-grain rice of the indica variety had been grown in the Mississippi delta region since the beginning of the 18th century, but this variety did not do well in California. Californians next tried the short-grain japonica variety with seed imported from Japan. However, as Americans are not fond of sticky rice, the Japanese rice proved extremely unpopular. This ultimately resulted in the development of a medium-grain hybrid of the long-grain indica variety and the short-grain japonica variety in 1948, and California rice was born. Although this variety was quite popular, it was not favored by the Japanese because it was not sticky enough. This led to further development, with the assistance of a Japanese immigrant known as the "Rice King", resulting in the premium Kokuho Rose rice in 1962. Kokuho Rose rice became so popular that it was also used in Japanese restaurants, ultimately increasing the number of Japanese restaurants and establishing itself as the American rice used in sushi.

On a side note, Japan experienced a terrible rice harvest in 1993, caused by cold weather. This led to the import of California rice, which was not well received by the Japanese people. The reason for this was that the imported rice was not the premium Kokuho Rose rice. Had the premium Kokuho Rose rice, or an equivalent, been imported, Japan’s reception of California rice would likely have been very different. The Akita Komachi and Koshi Hikari varieties of rice from Japan are also grown locally for those not satisfied with Kokuho Rose rice. Takezushi in Belgium uses the Nishiki variety of California rice.

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An assorted deluxe sushi plate available for €30. (roughly ¥5,000) at Takezushi in Belgium
Yoshida rice is grown in São Paulo for the local employees of the Japanese YKK Corporation. Once the rice has been rationed to employees, the remainder is sold on the market. This rice is extremely popular, and is soon sold out. However, as Brazilian rice loses much of its flavor about three months after harvest, due, it is thought, to characteristics of the soil, California rice, which maintains its flavor throughout the year, is also imported and is quite popular.

Photo 4 shows a rice field in the watershed region of the Po river, in Italy, which served as the backdrop to the 1949 film, Riso Amaro (Bitter Rice), starring Sophia Loren. Akita Komachi rice, brought from Japan by the owner of the Japanese restaurant, Rokko, in Rome, is grown on consignment by the Italian farmers, and then shipped throughout Europe.

Sushi Topics

1. Nori

The direct translation of nori is seaweed, and it is made from various species of a genus of red algae. For some time, Americans believed that seaweed was inedible. However, with the popularity of Japanese dishes like sushi, they have come to realize that it is a healthy food, now sometimes called...
a "sea vegetable."
The British have advised against eating hijiki, a brown sea vegetable, because studies have shown that it contains high amounts of inorganic arsenic. One of the problems may be in the way hijiki is prepared. In Britain, raw hijiki is sautéed, whereas in Japan, hijiki is first dried and then cooked, which could reduce the amount of inorganic arsenic. This helps to illustrate clear differences in food cultures.

2. Wasabi (Japanese Horseradish)
It seems that most overseas Japanese restaurants do not use genuine wasabi. While some of the more exclusive Japanese restaurants use wasabi paste, many others simply use horseradish. With agricultural quarantines in most countries being quite strict, it is very time consuming and expensive to import genuine wasabi from Japan. This, in turn, increases the price of foods made with the genuine article. As reference, products containing fifty percent or more genuine wasabi are labeled as having been made with genuine wasabi. Those made with less than fifty percent genuine wasabi are labeled as having genuine wasabi included.

3. Fish Substitutes
The fish used in sushi can sometimes be replaced with other varieties when the traditional fish is not available. The tilapia shown in photo ❶ is an African tropical fish used as a substitute for sea bream. It is such a good replacement that many people do not even notice that it is not sea bream. The Nile perch shown in photo ❹ is raised in Africa’s Lake Victoria, and is often deep fried for hotel buffets. Japanese conger can be substituted with snake eel, but care should be taken with farmed yellow tail, as deformities sometimes occur. Once the yellow tail is filleted, however, deformations cannot be detected. Scrap fish meat is sometimes mixed with vegetable oil or margarine to produce a cheap substitute for toro or negitoro. In this case, the product served is a far cry from the dish that was ordered, so be aware when eating at extremely inexpensive restaurants!

4. Sushi and Religion
Judaism has many laws regarding diet, including those that prohibit the eating of fish without scales or fins. Just after Takezushi opened, the first customer, and many afterwards, were Jewish. While there are many Jewish denominations, all with varying degrees of adherence to traditional laws and customs, the more liberal Jewish people who frequented Takezushi definitely helped in the success of the restaurant. The sign in photo ➋ indicates that this sushi bar is kosher. Food in accord with Jewish law is termed "kosher", and restaurants or shops selling kosher foods are regulated by a rabbi who guarantees that the food is indeed kosher. Therefore, the variety of sushi ingredients at a kosher sushi restaurant is extremely limited, and the prices are quite high. Part of the reason for the high prices, is that remuneration for the rabbi is included.
**Key Players in the Proliferation of Sushi**

I believe that the proliferation of sushi throughout the world was aided by the introduction of the conveyor-belt serving system and mechanical sushi chefs. These devices are definitely two of the key players in the proliferation of sushi worldwide.

Photo 1 shows a Warsaw sushi bar utilizing a conveyor-belt serving system manufactured by a company in Ishikawa prefecture, Japan. In overseas restaurants, conveyor belts conform to health regulations with a dome that keeps the dishes sanitary. This restaurant has seating for seventy with tables positioned next to the conveyor belt. I’ll wager that the employees of the company would be surprised to discover that their conveyor belt had found its way to Warsaw!

One sushi restaurant in Holland has a drawbridge over its conveyor belt, which clearly reflects their cultural heritage. At Sushi Train in Australia, dishes were originally carried to the customer on a model train, and the name stuck, even after the train was replaced with a conveyor-belt serving system. The hotels of the Jumeirah Hotel Group in Dubai are said to be seven-star hotels, indicating a status that exceeds the usual maximum ranking of five stars. One of the hotels has a conveyor-belt sushi bar that is truly luxurious and spacious, making it the most impressive sushi bar I have ever visited.

**New Varieties of Sushi**

The more sushi restaurants there are in the world, the more new varieties of sushi emerge. Photo 6 shows the Caterpillar Roll, made with rice topped with slices of avocado that resemble a caterpillar. Photo 7 shows the Rainbow Roll, made with a rainbow of thinly sliced fish including maguro, salmon, and white fish. There is also the Dragon Ball, which is wrapped with broiled eel and named for its resemblance to a dragon’s back. The Spicy Roll is created by wrapping rice in slices of maguro marinated in a mixture of soy sauce, Tabasco, red pepper and other spices. The Peking Roll, made with Peking duck, can be found in China. I predicted the eventual use of Peking duck after my first visit to China, when I was served a sushi dish of rice wrapped in chicken.

A rare, super deluxe type of sushi, Caviar Sushi (at right in photo 9) costs US$18 for a single piece. Served with the US$9 toro at left, these two pieces of sushi come to an incredible $27! Masa, in New York, serves a deluxe sushi set that ranges in price from US$300-500 per person. The ingredients used include foie gras, truffles, and caviar. As their fish is all shipped by air from the Tsukiji Fish Market in Tokyo, it is no wonder that their prices are so high.

Clearly, Japanese sushi is taking root throughout the world, and being modified to adapt to the host country’s diet and circumstances. This transformation is true proof of the ongoing international exchange in food culture. We must continue to carefully watch the ways in which sushi is accepted and transformed in various parts of the world.

(All photos and illustrations in this article were provided by the author.)