Kinema

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Kinema is one of the important components of the diverse food culture of the ethnic communities in the Eastern Himalayan regions of Nepal, the Darjeeling hills and Sikkim in India, the northeastern hills of India and Bhutan. Kinema is a whole-soybean fermented food with a sticky texture, gray tan in color and flavorful. It is similar to Japanese natto.

Hypothesis on the Origin of Kinema

The common word kinema is derived from “kinambaa” of the Limboo dialect (Limboo, being one of the major ethnic communities of Nepal), “ki” means fermented and “nambaa” means flavor. The kingdom of “Limbuwan” (presently the eastern Nepal districts of Tharabhum, Tupjung, Paschimbar, Dhanakata, and Iam) was established by the Limboo earlier than the seventh century and remained independent till the unification of Nepal in the seventeenth century. Though there is no historical document on the origin of kinema, it is certain that among the Nepalis, the Limboo started production and consumption of this unique fermented flavorful soybean food. The unification of Nepal, the existence of a mixed society of multietnic communities and the migration of people from one place to another might have resulted in the spread of kinema making and eating to other related Nepali communities such as the Rai, Tamang, Gurung, Mangar, etc. However, even now kinema is not popular among the Brahmin Nepalis. Other mountain ethnic communities in the Eastern Himalayas now share the delicacy of kinema. In Sikkim the Lepchas call it suityangser and the Bhutias call it bazi.

Methods of Preparation

In the Sikkim Himalayas, during the preparation of kinema (see next page), small-sized (up to 6mm) yellow-coated seeds of local cultivars of soybeans are soaked in spring water overnight and cooked by boiling until they can be pressed easily. Excess water is drained off and the seeds are cracked lightly by a wooden pestle (locally called a muslos) in a wooden mortar (locally called an okhli) to split the cotyledons, probably to accelerate fermentation and increase the surface area for aerobic spore-forming bacteria. Grits are placed in a bamboo basket lined with locally grown fresh fern fronds and is not popular among the Brahmin Nepalis.

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References


**Kinema Dishes**

*Kinema* is eaten as a side-dish curry with cooked rice. The delicacy of *kinema* can be perceived from its appealing flavor and sticky texture. The most common traditional recipe for *kinema* curry is as shown above.

To prepare: Heat vegetable oil in a frying pan and add chopped onion and fry until it becomes tender. Add tomatoes and turmeric powder and fry for two minutes. Add fresh *kinema*, salt, and sliced green chilies and fry for three to five minutes. Pour in a little water to make a thick curry, and cook for five to seven minutes. *Kinema* curry is now ready for serving with boiled rice. Sun-dried *kinema* is sometimes mixed with leafy vegetables to make mixed curry as a side dish.

**Socio-economic Factors**

*Kinema* production is an income generator for some families. It is sold in all local periodical markets, called “haats” in these regions, by rural women. Usually, it is sold by volume measured in a small silver mug containing 150-200 grams of *kinema*, and packed in the leaves of *Ficus hookeriana*, and then tied loosely with straw. Polyethylene bags are not used for packing *kinema*. One kilogram of *kinema* costs about 30 Indian rupees (72 yen). An average of five kilograms is sold by each seller in a local market and brings a profit of about forty percent. This small profit is spent on children’s education and domestic expenses. This trade has been protected as a hereditary right passed from mother to daughter. Though there is a good market for *kinema*, and some rural women are involved in it for income generation, processing is still restricted to the individual household; there is no organized processing unit or factory.

An inexpensive and ready-to-use pulverized starter culture of *Bacillus subtilis* has been developed for *kinema* production, which can be adapted to local conditions for more income generation.

**Microbiology and Nutritive Value of Kinema**

The heat resistant spore-forming bacterium *Bacillus subtilis*, lactic acid bacteria such as *Enterococcus faecium*, and a few types of yeast, *Candida parapsilosis* and *Geotrichum candidum*, for instance, have been recovered from *kinema*. However, *Bacillus subtilis* is the dominant microflora in *kinema* fermentation, followed by *Enterococcus faecium*. The rich microbial diversity in various sources, particularly the soybeans, equipment and leaves used as wrapping materials, harnesses indigenous microbiota for the spontaneous fermentation of *kinema*. The rural practices of not cleaning the mortar and pestle, and using fresh leaves used as wrapping materials, significantly correlate with their indigenous knowledge of “microbiology” to preserve and supplement microorganisms for the spontaneous fermentation of *kinema* without using starter cultures.

On a protein cost per kilogram basis, *kinema* is the cheapest source of plant protein and cheaper than animal and dairy products. During *kinema* production, soya-proteins, which have been denatured by the cooking process, are hydrolyzed by proteolytic enzymes produced by *Bacillus subtilis* into peptides and amino acids, enhancing digestibility. A remarkable increase in water-soluble nitrogen, trichloroacetic acid-soluble nitrogen contents, total amino acids, free amino acids and mineral content occurs during *kinema* fermentation, and subsequently enriches the nutritional value of the product. *Kinema* contains (per 100 grams dry matter):

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**Kinema Curry Ingredients**

<table>
<thead>
<tr>
<th>Serving Size</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kinema</td>
<td>250 g</td>
</tr>
<tr>
<td>Onion</td>
<td>1 (chopped)</td>
</tr>
<tr>
<td>Tomato</td>
<td>1 (sliced)</td>
</tr>
<tr>
<td>Green chilies</td>
<td>3</td>
</tr>
<tr>
<td>Turmeric powder</td>
<td>1/4 tablespoon</td>
</tr>
<tr>
<td>Salt</td>
<td>1 teaspoon</td>
</tr>
</tbody>
</table>
The diversity of Bacillus-dominating fermented soybean foods of Asia needs to be studied to trace the antiquity and similarity in the food cultures of Asia.

References


Japanese Food Heads West

The twentieth century was a very turbulent period in the history of Japanese cuisine. Along with economic and technological advancement, accompanied by urbanization and other social changes, Japanese foodways underwent a transition whose importance can be compared to the culinary borrowings from China in earlier times. The manner in which food had been produced, distributed, prepared and consumed in Japan for centuries has altered considerably in the last hundred years, in particular since the economic boom of the 1960s.1

The twentieth century was in the first place the time when Japanese cuisine accumulated influences from the West and accommodated itself to the needs of a modernizing society. However, it was also the period when Japanese food began to spread beyond the home isles. This process was initiated by the migration of Japanese people to East and Southeast Asia and South and North America. It intensified from the 1970s onwards, when the Japanese economy started to conquer foreign markets.

The first Japanese restaurant outside Asia opened in San Francisco in 1887, but eventually Los Angeles became the center of Japanese food culture in North America. By the early twentieth century, a Japanese quarter with the name Little Tokyo had developed in Los Angeles’ Chinatown, containing about forty Japanese restaurants, next to numerous Japanese butchers and vegetable dealers (Koyama 1985). Similar developments were observed in other areas with large accumulations of Japanese immigrants, such as Hawaii and Brazil (Mori 2000). A characteristic feature of these efficiently operated culinary infrastructures was the fact that they were targeted exclusively at the immigrant Japanese community. It was not until the 1970s that the Japanese restaurants operating in San Francisco, São Paulo, Rio de Janeiro and other areas with high concentrations of Japanese immigrants began to cater for non-Japanese customers, and that new Japanese restaurants began to open outside these areas.

The ecology movement initiated by the American hippies in the late 1960s was the first step in the global diffusion of Japanese food. The rediscovery of organic foods and a growth of interest in alternative diets, traditional Asian foodways in particular, among Americans provided Japanese cuisine with a spectrum of new possibilities for expansion. The progress of nutritional knowledge, which at about the same time began to recognize the negative impact of heavy, meat-based diets on health, was another important factor that helped to promote Japanese cuisine in the West. American dieters began to recommend the low-fat and low-cholesterol Japanese-style diet as one of the healthiest in the world, and this image accompanied the cuisine as it diffused worldwide.

The fashion of eating Japanese food, sushi in particular, that first flourished in California, was within a couple of years picked up by people in large cities of the east coast in the U.S. and gradually spread among the European capitals. By the end of the twentieth century, Japanese food had acquired a firm position in the Western culinary repertoire.

The spread among Europeans of a fashion for dining Japanese-style was fuelled, next to the health aspect, by the worldwide distribution of Japanese electronic products and cars and the rise of Japan’s prestige in the global arena. However, the role of the United States in the global diffusion of Japanese cuisine was at least as important. It can safely be assumed that sushi and teppanyaki would have never become so popular in Europe without the added value of being American food fads.

Katarzyna J. Cwiertka has for more than a decade conducted research in the field of Japanese food culture. Since acquiring a Ph.D. from Leiden University in 1999, she has also worked on a number of projects dealing with East Asian food. Dr. Cwiertka is the co-editor of the forthcoming volume Asian Food: The Global and the Local (Curzon Press 2001) and the coordinator of the Kikkoman Food Forum to be held in the Netherlands. Her most recent publications in English include “Culinary Globalization and Japan” in Japan Echo vol. 26 no. 3; and “From Yokohama to Amsterdam: Meldi-ya and Dietary Change in Modern Japan” in Japantraden vol. 12 (N. Liecutin & R. Haak, eds.), IUDICUM 2000.