



### "Cherokee bread."

The bread is made by a process similar to that of tamales.

Maize is ground up up to a powder-like consistency and then combined with water to make a paste.

The paste is then wrapped in corn leaves and allowed to ferment for two weeks.



Fermented bean curd also known as **su fu** or **dou fu ru** is the East's answer to cheese. This fermented food can be found in China, Hong Kong, Malaysia, Singapore, Taiwan, and other parts of Asia. Fermented bean curd is made by culturing small cubes of dried tofu with bacteria and mold. The solution is then cured with a solution of salt, soy paste, rice wine, and other spices. Different ingredients can be used when curing to give a variety of su fu options. Su fu has a texture of soft cheese and can be used to replace salt while cooking.

**Chicha** is a fermented (alcoholic) beverage common to Latin America with roots in the Andes and Amazonia regions. It is most commonly a corn beer, but it can also be made from quinoa, kañiwa (similar to quinoa), peanuts, yuca, palm fruit, among others. It is highly variable depending on the region. In the Incan empire, chicha had ceremonial and ritual uses; it is an important part of many cultures.

## List of Microbial Foods and Beverages

Food	Main ingredient/source	Country of origin
<b>Live Active Cultures (probiotics)</b>		
Cheese (not all are live-active)	Milk	Multiple origins
Dawadawa	Bean	Ghana
Fermented rice	Rice	China
Fil Mjolk	Milk	Sweden
Kefir	Milk	Russia
Kimchi	Cabbage	Korea
Kinima	Soybean	Nepal
Kombucha	Tea	Russia/China
Miso (only traditional, not live-active in soup)	Soybean	Japan
Natto	Soybean	Japan
Olives	Fruit	Greece/Italy
Pickles	Cucumber	India
Quark	Milk	Germany
Salami	Meat	Greece/Italy
Sauerkraut	Cabbage	Germany
Summer sausage	Meat	Multiple origins
Tapai	Rice	Indonesia
Tempeh	Soybean	Indonesia
Tsukemono	Vegetables	Japan
Umeboshi	Apricot	Japan
Yakult	Milk	Japan
Yoghurt	Milk	Greece/Turkey
<b>Microbes are the final product</b>		
Mushrooms	Fungus	Multiple origins
Quorn	Fungus	UK
Spirulina	Cyanobacteria	Multiple origins
Vegemite/Marmite	Yeast	Australia/UK
<b>Microbes involved in initial processing</b>		
Chocolate	Bean	Mexico
Coffee	Bean	Ethiopia
Tea	Leaves	China

### Microbes involved in final processes

Beer	Grain	Babylon
Bread	Flour	Multiple origins
Ginger Ale	Yeast	Ireland
Root beer	Yeast	US
Sourdough bread	Flour	Egypt
Wine	Grapes	China

### Additives/ flavorings made with microbes

Aspartame (diet soft drinks)	Recombinant bacteria	US
High fructose corn syrup (Regular soft drinks)	Corn syrup	Japan
Vinegar	Wine	France/Italy
Soy sauce	Soybean	Japan
Worcestershire sauce	Vinegar	UK

### Indirect role of microbes

Peanuts	Legume	Peru/Brazil
Soybeans	Legume	China

**Kenkey** is a traditional Ghanaian dish from fermented white corn.

It normally takes about two days of fermentation before it can be prepared. First the white cornmeal is combined with cornstarch and then water is gradually added at 37 degrees celsius. It is covered with a cloth and fermented for two days in a warm place. The dough is then cooked in a large pot of salt water. The dough is divided and rolled into balls and placed in dried corn leaves. Then it is steamed for about an hr and a half.

**Poi** is a staple food in Hawaii.

It is made from the underground stem of the root vegetable taro. Traditionally poi is made by baking or steaming the taro root and then pounding it on a wooden board with a basalt pestle. Following the mashing, water is added until the desired consistency is reached. Poi is most often eaten immediately while its fresh and sweet, but can be left to ferment and become sour (reminiscent of plain yogurt). The natural fermentation of the poi is carried out by lactobacillus, yeast and Geotrichum fungi.

**Toddy**, which is also a form of palm wine is very popular in Africa, Indonesia, India, and Malaysia. The alcoholic drink produced from the saps of various species of palm trees does not require a long fermentation process, which makes it more readily accessible in as short as two hours. After fermented the alcoholic beverage will appear as a milky white liquid. But if the toddy is allowed to ferment for too long it will acidify into a vinegar, which is why it must be refrigerated or drank somewhat quickly.

**Skyr** is a dairy product that is Icelandic in origin. The consistency of skyr is of Greek yogurt, but it has a milder flavor. Skyr is classified as a fresh sour but is consumed like a yogurt. Skyr has a slightly sour dairy flavor with a bit of sweetness. It is traditionally served with milk and toppings of either sugar or fruit. Commercial retail of skyr is usually flavored with vanilla or fruit. Skyr is produced from skimmed milk that is brought close to boiling and then cooled to 37°C. Then, a small batch of previously manufactured skyr is added to the warm milk to introduce the right amount of bacteria. Rennet is added and the milk starts to curdle. The mix is then allowed to ferment for 5 hrs before being cooled to 18°C.

