

## Ethnic Fermented Foods and Beverages of Sikkim

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Traditional foods are generally categorized into fermented foods and beverages, produced by microorganism (s), and non-fermented food. Fermented foods are prepared by the action of microorganism(s), either naturally or adding starter culture (s), which modify the substrates biochemically and organoleptically into edible product, and are thus generally palatable, safe and nutritious (Tamang and Holzapfel ,1999;Hansen,2002). These inexpensive culturally acceptable traditional foods provide basic diet as staple, pickle, confectionery, condiment and alcoholic beverages, which supplement enhanced nutrition, palatability, wholesomeness of the product with acceptable flavor and texture. More than 20 varieties of ethnic fermented food (Table A) and more than 10 types of fermented beverages (Table B) are consumed in Sikkim .Most of them are common while other fermented foods are less familiar and confined to particular community and places. Traditional alcoholic beverages constitute an integral part of dietary culture and have strong ritual importance among the ethnic people in the Himalayas where social activities require provision and consumption of appreciable quantities of alcohol (Tamang et al., 1996).

Alcoholic beverages are exclusively prepared from locally grown cereal –grains using traditionally prepared mixed inocula or starter called marcha (Tsuyoshi et al., 2005). Traditional alcohol brewing is a home –based industry mostly done by rural women using their indigenous knowledge of alcohol fermentation. Rural women also sell the food product in the local market and earn their livelihood.

Food consumption survey is indispensable tool for assessment of nutritional intake and pattern of food consumption (Tee et al., 2004). Yonzan and Tamang (1998) for the first time conducted a brief survey on consumption pattern of traditional fermented food of the Darjeeling hills and Sikkim .Until date, no updating and detailed survey on consumption of traditional fermented and non-fermented foods in Sikkim has been conducted .The aim of this report is to update the survey data on consumption of various traditional foods in Sikkim.

**Table A. Ethnic Fermented Foods of Sikkim**

Product	Substrate	Nature and use	Major consumer	Reference
Kinema	Soybean	Sticky soybeans: curry	non-Brahmin Nepalis	Tamang (2001)
Maseura	Black lentil	Dry, ball-like: condiment	Newar	Tamang (2005)
Gundruk	Leafy vegetable	Dried, sour: soup/pickle	All	Tamang <i>et al.</i> (2005)
Sinki	Radish tap root	Dried, sour: soup/pickle	All	Tamang and Sarkar(1993)
Mesu	Bamboo shoots	Sour: pickle	All	Tamang and Sarkar(1996)
Khalpi	Cucumber	Sour: pickle	Bahun-Chettri	Tamang et al. (2005)
Selroti	Rice-wheat flour	Round,deep fried: bread	Nepalis	Tamang (2005)
Chhurpi (soft)	Cow/yak milk	Soft, cheese-like, curry/pickle	All	Tamang et al. (2000)
Chhurpi (Hard)	Cow/yak milk	Hard-mass: masticator	All	Tamang(2005)
Chhu	Cow/yak milk	Soft;strong-flavoured,dish	Bhutias, Sherpa,Lepchas	Dewan and Tamang(2006)
Philu	Cow/yak milk	Cream:fried curry with butter	Bhutias, Sherpa	Dewan and Tamng (2007)
Somar	Cow/yak milk	Paste, flavoured: condiment	Sherpa	Dewan and Tamang (2007)
Dahi/Shyow	Cow/yak milk	Curd: savory	All	Dewan and Tamang (2007)
Mohi	Cow milk	Butter-milk	All	Dewan and Tamang(2007)
Gheu	Cow Milk	Butter	All	Tamang(2007)
Sidra	Fish	Dried fish: curry	Non-Brahmin Nepalis	Thapa et al. (2006)
Sukuti	Fish	Dried, Salted	Non-Brahmin Nepalis	Thapa et al. (2006)
Gnuchi	River Fish	Smoked fish: curry	Lepchas	Thapa et al. (2006)
Kargyong	Beef/Yak/Pork	Sausage: curry	Bhutias, Lepchas	Tamang(2005)
Sukula	Buffalo meat	Dried meat: curry	Newar	Tamang(2005)
Sukako masu/Satchu	Mutton/Yak/Beef/Pork	Smoked meat; curry	Non-vegetarian Nepalis: Bhutias Lepcha	Tamang (2005)

**Table B. Ethnic Fermented Beverages of Sikkim**

<b>Product</b>	<b>Substrate</b>	<b>Nature and use</b>	<b>Major consumer</b>	<b>Reference</b>
Marcha /Khesung/Phab/Buth	Rice, Wild herbs, spices	Starter culture to ferment alcoholic beverages	Major producers: Limboo, Rai and Lepcha	Tamang et al. (1996)
Kodo ko Jaanr/ Chyang/ Chee	Finger Millet	Mild-alcoholic, slightly sweet-acidic beverage:	Non-Brahmin Nepalis, Bhutias, Lepchas	Thapa and Tamang (2004), (2006).
Bhaati Jaanr	Rice	Mild-alcoholic, sweet-sour, food beverage; paste	Non-Brahmin Nepalis, Bhutias, Lepchas	Tamang and Thapa (2006)
Makai ko jaanr	Maize	Mild-alcoholic, sweet-sour, beverage	Non-Brahmin Nepalis, Bhutias, Lepchas	Tamang et al. (1996)
Gahoon ko Jaanr	Wheat	Mild-alcoholic, slightly acidic, beverage	Non-Brahmin Nepalis, Bhutias, Lepchas	Tamang et al. (1996)
Simal tarul ko Jaanr	Cassava tuber	Mild-alcoholic, sweet-sour, food beverage: paste	Non-Brahmin Nepalis, Bhutias, Lepchas	Tamang et al. (1996)
Jao ko Jaanr	Barley	Mild-alcoholic, slightly acidic, beverage	Non-Brahmin Nepalis, Bhutias, Lepchas	Tamang et al. (1996)
Faapar ko jaanr	Buck wheat	Mild-alcoholic, slightly acidic, beverage	Non-Brahmin Nepalis, Bhutias, Lepchas	Tamang et al. (1996)
Raksi/ arak	Cereals	Clear distilled liquor; high alcohol content drink	Non-Brahmin Nepalis, Bhutias, Lepchas	Kozaki et al. (2000)