



## A Comprehensive Overview of Ethnic Food and Beverages of Jaunsar-Bawar Tribal Region, Uttarakhand, India

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**Abstract:** Ethnic foods not only serve the dietary purpose but also offer a range of health and medicinal benefits. In the present era of urbanization and modernization, the age-old traditions and cultural practices are rapidly getting extinct. This is particularly true for a traditional knowledge system that has not been properly documented and scientifically studied. This article presents a comprehensive detail about various fermented and non-fermented food products locally made and consumed by the tribal community of Jaunsar-Bawar region of Uttarakhand state. The survey of the sites and interaction with local people revealed that the tribal community still follows their age-old custom of making various traditional food products. *Aske, Chilra, Dhindki, Kadhiyiek, Sidde, Khenda, Pandheye, Mashyada bhaat, Sattu, Baari, Lemda* are the local names of important non fermented ethnic foods made in this region. In addition, distilled and non-distilled alcoholic beverages are prepared through fermentation with local names as *Ghandhie Gaingti, Mava, Gaingti, Soor/Daru and Paakuyi*.

**Keywords:** Ethnic food • Beverages • Jaunsar-Bawar • Tradition • Culture

### Introduction

Culture plays a vibrant role in forming societies and it is created by specific art and practices passing through generations known as 'tradition'. Each ethnic group or civilization has a definite culture of their own which is built over a long period of time and cannot be altered easily. Tradition symbolizes geography, history, lifestyle, food habits, customs and rituals of nations (Kristbergsson and Oliveira, 2016). The special art of food and beverage preparation being practiced in different ethnic groups since time immemorial is still under use and being continuously refined by scientific and technological innovations. Ethnic foods and dishes are organic in nature with plenty of nutrition and consumed by local people for many generations in an unaltered form. Traditional foods are generally limited to a confined group of people and are not processed, packaged or delivered at a large scale. They are considered

very healthy and nutritive as these foods are made from natural raw materials and resources that are largely free from the synthetic and harmful substances. Ethnic cuisines are produced and consumed in unique styles on a regular basis or during some specific celebrations, seasons and dates as per the cultural practices of a community (Kristbergsson and Oliveira, 2016). Such food items can be both fermented and non-fermented types. For fermented foods, the starter or inoculum is generally developed by using locally grown carbohydrate rich cereals, plant parts and herbs and shrubs of medicinal value (Rawat et al., 2021). There are several unique ethnic food products that may be included in the commonly acceptable food system. Also exists a wide perception about the medicinal qualities of traditional food which promotes their daily use (Reddy and Dam, 2020). Worldwide, attempts



have been made by various researchers to nutritionally characterize different ethnic food stuffs prepared by tribal communities. Such foods have been described as safe and rich source of nutrients in various global reports (Ghosh-Jerath et al., 2021). In India, most of the studies related to ethnic foods have been conducted on the fermented products (Thakur et al., 2004; Nehal, 2013; Sathe and Mandal, 2016; Rawat et al., 2018; Deb and Bendangnaro, 2020). Many of them just report the documentation of the overall process with less information on the nutritional quality of the final product. On the other hand, just a few reports are available on the non-fermented ethnic foods traditionally prepared in isolated or tribe communities (Nongdam & Tikendra, 2014; Tamang and Thapa, 2014; Ghosh-Jerath et al., 2021). Blah and Joshi (2013) have evaluated nutritional contents in the traditional cuisines of *Khasi* tribe of Meghalaya, India and found them as a good and balance dietary resources. However, the art of food making of various tribal communities in India yet need to be scientifically investigated and properly documented. Jaunsar-Bawar region located in the state of Uttarakhand is one such area where local people still follow their age-old customs and prepare a variety of ethnic food and alcoholic beverages. Although there is documentation of traditional alcoholic beverages of this region in literature (Rana et al., 2004; Bhardwaj et al., 2016) but a comprehensive detail of all kinds of ethnic foods prepared and consumed in this region, is not available in literature. The present work reports the types and methods of preparation of various ethnic foods and beverages of Jaunsar-Bawar region.

### Methodology

The study was conducted by contacting the native people of Jaunsar-Bawar tribal region of Uttarakhand, India to identify and investigate about the ethnic food stuffs traditionally prepared in the region. Active

interaction with local people by visiting different villages within this area was done to collect information about the types and methodologies for preparation of traditional food and beverages.

### Observations

There has been a tradition of making various fermented and non-fermented foods as well as alcoholic beverages in the Jaunsar-Bawar region as a part of their tribal culture. Photographs of some of the food stuffs in their finally prepared or cooked form are shown in Fig. 1. The details collected about the types and preparation methods of ethnic food and beverages of Jaunsar-Bawar region are mentioned below.

#### A) Fermented foods

##### *Chilra*

*Chilra* is prepared by making slurry of wheat flour which is either used instantly or left for 2 to 4 hours for natural fermentation. The slurry is spread over a hot plate (*tawa*) either bare handedly or with the help of a bowl to give it a round shape in the initial stage. It is then baked in low flame mainly from one side. The final product is folded and served in triangular shape with clarified butter (*ghee*), sugar, honey, *dhauroti* or *chutney*. *Dhauroti* is a thick paste of roasted and fried red lentils.

##### *Sidde/ Sidku*

*Sidde* or *Sidku* are steam cooked, round or oval shaped foods which are of two types. The first one is *Peethe ke Sidde* which is prepared by kneading rice flour with hot water into a dough. The same is left for 1-2 hour for fermentation. The small round balls of dough are then flattened and stuffed with roasted sesame seeds and salted walnut paste. In a wide bottom container, water is filled upto one fourth of the total volume and layered with leaves of citrus plant. The stuffed dough pieces are placed over this layer and left for steam cooking on low flame. The second type of preparation is *Aalu ke mishyare Sidde* in which round small chapatis made of wheat flour are first stuffed with boiled potato and



then slightly baked on hot plate for few minutes. The baked product is then steam cooked in a similar manner as *Peethe ke Sidde*. Both types of *Sidde* are served with *Ghee*. The dish is generally prepared during local festivals and gatherings. In some villages of this region, this is also known as *Aande ki roti*, *Aundwe*, *Uluwe*, etc.

#### **Aske/ Kapreudi**

To prepare this dish, rice and wheat flours are first mixed in an approximate ratio of 3:1 with water to make a slurry which is left for 2-3 hours for fermentation. It is then poured into an earthen pot or deep iron pan for baking from one side under low flame. It looks similar to *Idli* prepared in South India. *Aske* is also served with *Ghee* or cooked *Rajma* (kidney beans) and *chutney*.

#### **B) Non- fermented food**

##### **Pandye**

This dish is mainly prepared and consumed in the month of January. Small chapatis are made of wheat flour and stuffed with the mixture of sesame seed, walnut, jaggery and fat (*charbi*) of goat. The stuffed chapatis are then submerged in boiling water for cooking. The cooked stuffs raise to the surface of water and collected. *Pandye* is served with *ghee* and considered to be very nutritious food that keeps body warm in winters.

##### **Taiya**

This is a deep-fried edible item much similar to unleavened deep fried Indian bread (*poori*), prepared in a stuffed or non-stuffed form. Stuffing can be done with a mixture of walnut (*Akharot*), sesame seeds (*Til*), *Bhangjeera* (*Perilla frutescens*) or boiled potato, etc. Although it can be prepared and consumed during local festivals and marriage functions, it is specially served to a lady guest on her arrival at a relative's place. The dish is also known by few other names such as *kadaya*, *taiya* and *roti* in different parts of the tribal region. On the eve of *Makar Sankranti*, non-stuffed sweet *poori* is prepared with wheat flour and jaggery and is known as *Babar or*

*Meethi puri*. The normal *chapati* or *roti* of wheat flour is called as *Koduwa* in Jaunsar-Bawar.

##### **Dhinki**

The main ingredients to prepare this recipe are finger millets (*Koda*) and wheat grains which are soaked in water and left in a bag or container for germination for few days. After 5-6 days, germinated seeds are kept in sunlight for about a week for drying. All the dried seeds are then ground into flour and kneaded into smooth dough using lukewarm water. Small pieces of the dough are flattened and steam-cooked in a big container and called as *roti*. After cooking, *roti* is broken into smaller pieces and kneaded into smooth dough again. Small pieces of dough are taken and made round in shape (*ladoos*) are made with the help of *ghee* and kept in a box for 1-2 hours and then served as alternate of sweets. *Dhinki* is a very special and unique dish which is generally made in the month of September and October or during small family functions. These *ladoos* are naturally sweet in taste and also rich in calcium, proteins, minerals and fibers.

##### **Kadiyiek**

This is a *Kheer* like food material which is prepared from finger millet and barley grains soaked in water by following the same process as in case of *dhinki*. To prepare *Kadhiyiek*, a slurry of stoneground flour in lukewarm water is made. The slurry is cooked for around 8-10 hours in low flame without addition of sugar. This dish is considered very nutritious for women and growing children for developing bone strength.

##### **Khenda**

Wheat flour and jaggery are required to prepare this dish. First, jaggery is dissolved in boiling water and then wheat flour is slowly mixed into it with the help of a wooden stick for about 1-2 minutes. Soft dough of this mixture is prepared and served in the shape of a well filled with *ghee* in a plate. *Khenda* is considered to be very nutritious which is



mostly consumed by ladies after 1-3 months of delivery. Sometimes, it is also served as *Prashaad* during a spiritual event especially on the occasion of the worship of goddess *Kaali*.

#### **Mashyada Bhaat**

This recipe is a variety of *Pulao* (Pilaf) which is made of mainly red rice and split black lentil (*urad daal*). Split black lentil is first soaked in water overnight and then boiled in a pressure cooker. The boiled stuff is then cooked with red rice to finally prepare the dish. This is generally served with *chutney* and a mixture of walnut, *bhangjeera* (*Perilla frutescens*), sesame seeds and *ghee*. This dish is considered very healthy in nature and generally consumed in winter to keep the body warmer.

#### **Sattu**

*Sattu* is a very common and healthy food locally prepared and consumed by Jaunsari people. *Sattu* is prepared from the grains of barley or maize. The dried maize grains are directly roasted and ground into flour while in case of barley, grains are first soaked in water for 4-5 days before roasting and grinding. The flour can be stored for a very long period and served as a smooth dough or slurry prepared in milk, water or butter milk along with coriander and pudina *chutney*.

#### **Lambda**

It appears similar to *dalia* or *kheer* and prepared by cooking the ground amaranth (*chaulai*) grains with water. The cooked material is mixed with *ghee*, milk or butter milk and salt as per taste. The tribal people consume it at regular intervals as it provides them strength and immunity.

#### **Baari**

It has been a staple food in the earlier period for Jaunsari tribal people, however, now-a-days it is not regularly consumed. *Baari* is prepared from a mixture of wheat, barley and maize grains. The grains are grinded into a coarse mixture and then cooked in water. *Baari* is eaten with cooked lentils or butter

milk. This is believed to be a very nutritious food by the local people.

#### **Meat**

In Jaunsar-Bawar tribal area there is a tradition of using preserved meat of goat and sheep. Local people preserve the meat by applying turmeric powder and salt and leave it for air drying. By this method meat can be preserved and used for a period of 6-8 months. Meat is the main food item served during marriage functions and festivals like *Diwali*, *Bissu* (*Baisakhi*), etc.

#### **Chewda and Mudda**

*Chewda* and *Mudda* are snacks prepared during different occasions and festive seasons to serve the guests. *Mudda* is prepared from boiled wheat grains in which salt is added as per taste and the mixture is dried under sunlight for few days. The mixture is roasted in hot sand and sieved. It is served with walnut, rice papad and *bhangjeera* (*Perilla frutescens*). On the other hand, *chewda* is prepared by soaking rice grains in water for 6-10 days. The soaked rice seeds are slightly roasted on hot plate and crushed in mortar until the cover of the seeds is removed. It is then properly cleaned and mixed with walnuts, *bhangjeera*, rice papad and sometimes with little sugar.

There are various types of local alcoholic beverages prepared by tribal people dwelling in Jaunsar-Bawar region. Both distilled and non-distilled type of liquors are made by using a common inoculum named *Keem*. *Keem* is prepared from barley flour in which a powder, made by crushing different parts (root, twig, leaf etc.) of some medicinal plants such as *Sapindus mukorossi* Gaetn. (*Athu*), *Cannabis sativa* L. (*Bhang*), *Crassa opaca* Stapf ex Haines (*Karonda*), *Artemisioa roxburghiana* Wall. Ex. Bess. (*Chamur/chamara*), *Zanthoxylum armatum* DC (*Timur*), is added (Rana et al., 2004). Ideally, the ratio of barley flour and herbal powder should be 5:1. The mixture is well kneaded and round balls each weighing around 2 kg are made of it. These



balls are then placed over a layer of *Bhang* and other leaves and stored in a dark closed room for nearly 30-40 days. Now the *Keem*, also locally called *Jadi* or *dawai*, is ready to be

used as inoculum (Fig 2). In this form this can be stored for a period upto 1-2 years. A more detailed description of *Keem* making has been described by Rana et al., 2004.



**Fig. 1: Some traditional foods of Jaunsar-Bawar region of Uttarakhand.**

**C) Alcoholic beverages**



**Fig. 2: Starter inoculum (*Keem*) of Jaunsar-Bawar region, Uttarakhand.**

**Non-distilled beverages**

***Paakuyi***

This is a non-distilled product prepared from barley, finger millet or rice grains. The cooked grains are placed in a large vessel with narrow mouth or earthen pot and water is added to it. A piece of *Keem* is crushed and mixed into it along with molasses or jaggery. The liquid is kept in a dark room for fermentation for a period of 1-3 months. The mouth of the

vessel/pot is sealed with kneaded wheat flour. Once the fermentation is over, the liquor is filtered and the filtrate is stored in a special traditional mud vessel called *Bhandki* or *Suraahi*. For serving *Paakuyi*, special bowl made of bronze also called *Beluwa* or *Katora*, are used. This is served during marriage functions and local festivals. Sometimes the fermentation is carried out for a period less than one month and the liquor is called *Ghaingti*.

***Ghandie Ghaingti***

*Ghandie Ghaingti* is prepared in a similar manner as *Paakuyi* however, the starting raw material here is *Sattu* made of barley. This is uniquely identified as *Ghandie Ghaingti* because of its turbidity. The fermentation period is also comparatively less and the process is completed within 10-15 days. Although commonly made and consumed in earlier period this is rarely prepared in the present time.

***Mava***

The substrate for *Mava* is a mixture of *Sattu* and honey and the fermentation lasts for 3-4 months. However, in the recent years due to high price and less availability of the sufficient amount of honey, this beverage is occasionally prepared in the tribal region.



## ***Distilled beverages***

### ***Soor/ Daru***

This is a very popular fermented alcoholic beverage prepared in almost every village of Jaunsar-Bawar. This is a distilled beverage prepared from barley grains or finger millets. To prepare the substrate, jaggery and water is added and thoroughly mixed. Sometimes cooked rice is also added. This is inoculated with *Keem* in a big wide mouth container. The mouth of the container is kept closed and the whole container is covered with woolen clothes to keep it warm and allowed to ferment for about 7-10 days depending upon the weather. The completion of fermentation is recognized by formation of CO<sub>2</sub> bubbles and a typical smell and taste of the broth. The broth is now filtered and filled in a big metallic vessel for distillation (Fig. 3). The vessel has a wooden top with a hole at the center, over which a large bowl filled with water is placed. The mash filled in the vessel is boiled and the distillate is collected in separate vessels or bottles. The distillate may have different concentration of alcohol depending upon the time of collection. The alcohol concentration may vary between 35-40 %. The residue left after distillation is used to feed cattles.



**Fig. 3: Distillation assembly used in Jaunsar-Bawar region, Uttarakhand.**

## **Discussion**

In the present era of IPR (Intellectual Property Rights), it is important to study and document

the scientific basis of traditional cultural and ethnic practices in various parts of the country. The indigenous populations can be well characterized by the tribal communities who have a rich social and cultural backgrounds as well as a unique indigenous food system (Ghosh-Jerath et al., 2016). In the Jaunsar-Bawar tribal region located in Uttarakhand, the customary skills of dwelling and lifestyle are still followed by the Jaunsari tribal community. There is a rich culture of preparing and consuming traditional foods and beverages as an essential component of their social and ethnic values. In India, most of the studies related to ethnic food in different societies have been largely focused on the fermented products (Thakur et al., 2004; Nehal, 2013; Sathe and Mandal, 2016; Rawat et al., 2018; Deb and Bendangnaro, 2020). In the present paper a comprehensive overview of both fermented and non-fermented traditional food and beverages of Jaunsar Bawar tribal region is given. The ethnic food stuffs of Jaunsari people are rich in proteins, vitamins, calcium, proteins, fibers with great health significance. Similar traditional food products have been reported from various parts of India such as Himachal Pradesh, Tamil Nadu, Sikkim, Arunachal Pradesh, Nagaland, Tripura, Assam and other eastern hilly regions (Rawat et al., 2018). Jaunsar-Bawar region of Uttarakhand shares its boundary with Himachal Pradesh and that may be a reason for a similarity in their culture, customs and mode of livelihood. Savitri and Bhalla (2007) and Thakur et al. (2004) have reported ethnic foods of Himachal Pradesh with similar names such as *Aske* (in Bilaspur, Hamirpur and Solan areas), *Baari* (in Kullu area) *Chilra* and fried rotis (in Lauhal, Spitti, Kinnaur and Kullu sites), *Siddu* (in Kullu), steamed cooked stuffed *rotis* (Lahaul). However, there may be some differences in their preparation methods. For making all kinds of alcoholic beverages the same inoculum i.e., *Keem* is used in Jaunsar Bawar



region. The locally made inoculums used for making alcoholic beverages are given different names in different ethnic communities such as *Balma* in Bhotia tribe of Uttarakhand (Das and Pandey, 2007; Bhardwaj et al., 2016), *Phab* in Himachal Pradesh (Thakur et al., 2004; Kanwar et al. 2011), *Nuruk* in Korea, *Ragi* in Indonesia, *Loogpang* in Thailand, *Chiu-yueh* in China, *Marcha/Bakhar* in Nepal and Bhutan (Tamang, 2015 a). According to the belief of elderly people of Jaunsar region, traditionally prepared beverages provide strength, purifies blood and helps in digestion (Rana et al., 2004). Similarly, the non-fermented ethnic foods also have great nutritional value and distinct health benefits. *Lemda*, *Sattu* and *Baari* help maintain good digestion and are also very nutritious due to high fiber and protein contents. *Khenda* is also considered a very healthy diet and consumed by ladies for many days post-delivery. The raw material used to prepare *Dhindki* and *Kadiyiek* are rich in calcium and therefore, consumption of these dishes strengthens the bones. Likewise, *Mashyada bhaat* is a great source of fiber, vitamin B, zinc, iron, manganese, selenium, magnesium whereas *Pandye* are rich in proteins, vitamin and minerals. Both these dishes are consumed mainly in winters to keep the body warm.

### Conclusion

In tribal region, the knowledge of traditional processes and technologies have been continuously transferred from generation to generation verbally without any written or well documented set of protocols and procedures. The traditional cuisine is cost effective, require less labour input and the raw material needed are also locally and cheaply available. The ethnic foods and beverages of Jaunsar Bawar region offer excellent opportunities for commercialization. However, the custom and ethnicity of food preparation and use at the domestic level must synergize with regulatory standards.

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