

Short Communication

ETHNIC STUDY OF ADUWA KO JAANR, A LESSER-KNOWN FERMENTED GINGER MILD ALCOHOLIC BEVERAGE OF EASTERN HIMALAYAS

AAWAJ KULOONG RAI^{ID}, SANTA RAM JOSHI^{*ID}

Microbiology laboratory, Department of Biotechnology and Bioinformatics, North-eastern Hill University, Shillong-793022, Meghalaya, India
*Corresponding author: Santa Ram Joshi; *Email: srjoshi2006@yahoo.co.in

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ABSTRACT

Consumption of fermented foods and beverages is a part of the dietary cultures of the Himalayan community and is prevalent amongst various ethnic groups in this region. Native of the Himalayan range ferment food and beverages using 'ethno-microbiological' knowledge acquired and practiced since ages, which lacks documentation. This knowledge is transmitted through practice and verbally to new generations. Women folk are engaged in this traditional fermentation culture with cultural and ethnic significance. In addition to its distinctive tastes, fermented foods and beverages provide health advantages to indigenous people. It becomes essential to highlight their scientific value due to their health benefits and ethnic relevance. The diverse nature of fermented foods and beverages, the fermentation process, and the traditional knowledge behind fermentation are a heritage of the eastern Himalayas. Traditional fermentation, in which raw materials are organic and natural starter culture is used, is part of the people's socio-economic lifestyle. Their preservation highlights organic and conventional practices as an excellent alternative to a healthy lifestyle. The present study documents a lesser-known mild-alcoholic fermented beverage, 'Aduwa ko Jaanr,' from the Eastern Himalayan region. A steady decline in traditional fermentation practices has recently been observed due to changes in food habits and culinary practices.

Keywords: Aduwa ko Jaanr, Ethnic fermented food and beverage

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The Eastern Himalayan region consists of a diverse ethnography composed of different tribes. Fermenting foods and beverages is deeply rooted in this region's culinary practices. Such traditionally fermented foods and drinks, along with the by-products of fermentation, play an essential role in shaping the foodscape and cultural development of the people [1]. With the aid of indigenous traditional knowledge, the native inhabitants of these areas ferment food and produce alcoholic beverages [2]. Even the Indian traditional medicine systems, particularly Ayurveda, use fermented formulations. The fermented formulations are synthesized with the use of medicinal herbs which contain self-generated alcohol. Such formulations or products of fermentation are stable and have significant efficacy in treating various ailments [3]. Fermentation also increases the quality and absorption of active phytochemicals by the human body [4]. For many years, people have used fermented foods and drinks as everyday meals or dietary supplements [5]. Drinking alcohol is part of the tradition and custom of the ethnic communities of the Eastern Himalayan region comprising areas of Sikkim, Darjeeling, Kurseong, Kalimpong, Doars, Siliguri, Nepal, and even Bhutan [6, 7]. The use of alcohol is prevalent and profound during festivals, marriage ceremonies, and rituals of different tribes as it has a deep-rooted significance in cultural heritage. Apart from that, it is consumed by the locals as a recreational drink after a

hectic, busy schedule. Consumption of alcoholic beverages is found mainly in the 'Matwali' castes, which means 'alcoholic drinkers' of the non-Brahmin Nepali community. Matwalis primarily include the Rai, Limboo, Gurung, Magar, Tamang, Sunuwar, Newar, Sherpa, Bhutia, and Lepcha tribes [8, 9]. The fermentation of beverages is purely organic. This brewing is usually found in village areas of the Eastern Himalayas and is traditionally done by women [7].

Aduwa ko Jaanr is a mildly alcoholic beverage prevailing amongst the native Gorkha community of the Eastern Himalayan region. Jaanr is a general term used by the local Nepali/Gorkhali people for fermented alcoholic beverages, and Aduwa is the substrate, i. e., the rhizome of Ginger (*Zingiber officinale* Rosc.). Tubers of *Zingiberaceae* family have been used commonly for therapeutic and culinary purposes [10]. The malting process is generally not used in Asian traditionally fermented beverages. Instead, starter cultures, which are dry, with various herbs and spices, and natural fermenting microorganisms such as yeast, are used [11, 12]. Marcha (fig. 1b) is the local name for the starter culture, which is amylolytic, having a pH of 5.2, moisture content of about 13% w/w, and ash content of about 0.7% w/w. Microorganisms, namely, *Pediococcus pentosaceus*, *Saccharomycopsis fibuligera*, *Pichia anomala*, *Mucor circinelloides* and *Rhizopus chinensis* are associated with Jaanr fermentation and are present in Marcha [13].



Fig. 1: (a) Fermented mass of Aduwa ko Jaanr, (b) Marcha, the starter culture

The ratio and proportion matter when making the product. Hence, proper knowledge is required. The flavor of Aduwa ko Jaanr is a blend of sweet and sour with a hint of ginger's faint bitterness. The fermentation process (fig. 2) starts with collecting fresh ginger rhizome and washing it clean to remove the soil. Secondly, the tubers are steamed just enough to make them soft and left for

further cooling to dry until moisture is removed. The dried mass is adequately mixed with powdered marcha, packed in an airtight container, and left for fermenting. After the fermentation period, a pleasant aroma is released from the beverage, indicating that the fermenting microbes have done their job and are ready to be served.

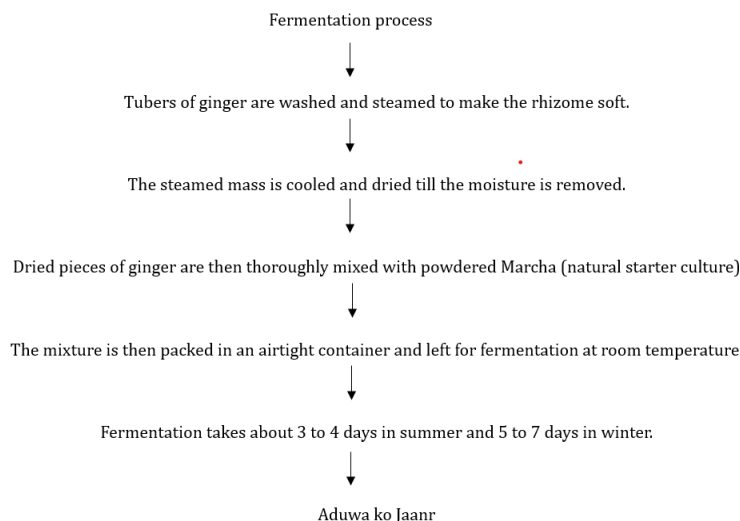


Fig. 2: Fermentation process of Aduwa Ko Jaanr

The Himalayan ethnic people believe the beverage to have health benefits as well, apart from its use as a recreational drink. The traditional drink is prepared using indigenous techniques and knowledge passed on from many generations. Aduwa ko Jaanr is a sustainable food (beverage) because of its health benefits, and the people making it are also economically and equally benefitting from it. The process is natural, safe, low cost, and indigenous heritage. The waste material from the fermentation is used as cattle feed. However, only small-scale production of this beverage is seen. Commercial large-scale industrialization has not been observed. The traditional fermentation process is practiced at the household level using spontaneous and uncontrolled inoculum. Such a technique is ambiguous regarding which starter culture or inoculant is present in the raw food material and the processing environment. Thus, traditional spontaneous fermentation has a setback to low yield, quality variability, and inefficiency [14]. Optimization of conditions and strain involved in fermenting can be modulated for large-scale production of functional beverages.

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AUTHORS CONTRIBUTIONS

Both authors have equally contributed to ensuring the integrity and accuracy of the data presented in the paper.

CONFLICTS OF INTERESTS

The authors declare no conflict of interest.

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