



ISSN (E): 2277-7695

ISSN (P): 2349-8242

Impact Factor (RJIF): 6.34

TPI 2025; 14(9): 38-44

© 2025 TPI

www.thepharmajournal.com

Received: 15-07-2025

Accepted: 18-08-2025

Porna SarmahAAU, Krishi Vigyan Kendra,
Kokrajhar, Assam, India**Shahnaz Akhtar**Department of Entomology,
Assam Agricultural University,
Jorhat, Assam, India**Kasturi Choudhury**Department of Entomology,
Assam Agricultural University,
Jorhat, Assam, India

Millet-based ethnic delicacies of different communities of Assam state: Preparation methods and significance

Porna Sarmah, Shahnaz Akhtar and Kasturi Choudhury

DOI: <https://www.doi.org/10.22271/tpi.2025.v14.i9a.26263>

Abstract

Millets are considered as coarse cereals of India and primarily constitute a diverse group of small grains and are classified as major and minor millets. The three major millets grown in Assam are finger millet, foxtail millet and proso millet. It is the oldest staple food grains known to mankind. Millets are rich in protein, fats, dietary fibre and minerals such as calcium, iron, sodium etc. These millets have diversified high food value but consumption of millet has been declined due to difficulties in preparation and lack of standardised processing techniques to compete with fine cereals. Hence, to increase the utilization of millets as popular food, emphasis must be given on exploration of different traditionally formulated millet-based food items, which are consumed by certain communities of Assam. Most of the traditional method to cook food from millet by local people and tribes of the state of Assam are indigenous. The active nutri-ingredients and potent phyto-chemicals with promising nutritional and pharmacological properties present are yet to be explored and some are in the initiative. Keeping this in view, a number of respondents were surveyed and found that there are many indigenous food items which are frequently consumed by different community where different plant-parts, cereals, milk, fruits and nuts were incorporated to enhance its taste. The different food items include millet-based items like *roti*, *dosa*, snacks, sweet dish, etc.

Keywords: Millet, ethnic food, Assam, traditional food

Introduction

Millets are a group of small seeded cereal grains, which are considered as miracle grains, are gaining popularity in recent times. Millets are distributed in most of the Asian and African countries and parts of Europe. They are the most important species in terms of cropped area and contributions to food security in regions of Africa and Asia (Rao, *et al.*, 2011) ^[1]. Millets are primarily grown in poor or marginal soil & dry areas of tropical, sub-tropical and temperate regions of India. They are also known as Nutri-cereals due to high content of calcium, magnesium, zinc, iron, dietary fibre, quality protein etc. as compared to other cereals and also it has low glycaemic index. Moreover, millets are climate smart crop due to its drought tolerance capacity, ability to thrive in harsh & arid environment & less affected by pest & diseases. Moreover, millets are C₄ plants having high photosynthetic efficiency, more dry matter production capability, and survival under adverse agro-climatic conditions with lesser inputs and more economic returns.

India has declared the year 2018 as the National Year of Millet to promote millets for nutritional security. Further, the year 2023 has been declared by the United Nation as 'International year of Millets'. Although millets have been an integral part of the food system in Assam, but over the years, these crops have gradually faded away from the farmers' fields of the state. Therefore, taking this into consideration, Government of Assam has also taken initiative to observe the year 2023 as the year of millets. The millets which are grown in Assam are finger millet (*Eleusine coracana*), Foxtail millet (*Setaria italica*) and Proso millet (*Panicum miliaceum*).

Millets are mainly available in a pearl and hulled kind, which taste slightly sweet nearly-nut like flavor. Millets are a rich source of protein (8%), energy, fat (4%) dietary fiber and minerals as compared to rice. It is a rich source of calcium and non-starchy polysaccharides (dietary fiber). Prolamines and glutelins form the major portion of their proteins. The highly nutritious millet is also non-glutinous, non-acidic and least allergenic form of food. These millets have diversified high food value (Khatonair and Das, 2020) ^[2].

Corresponding Author:**Porna Sarmah**AAU, Krishi Vigyan Kendra,
Kokrajhar, Assam, India

Surprisingly consumption of millet has declined due to drudgery in preparation and lack of standardized processing techniques to compete with fine cereals. In this regards, S D Deshpande *et al.*, (2021) [3] stated that inspite of rich nutritional properties of Millet, some inheritant properties like hard seed coat, poor digestibility, low micronutrient bio-availability are major hindrances in processing and cooking of millets. Changing life style, urbanization, age, race, specific nutritional status, attested immunity, socio-economic status, sedentary life-style, stress and changing food patterns are some of the contributing factors to increased risk of 'non-communicable disorders' namely Obesity, Diabetes mellitus, Cardio-vascular disease (CVD), overweight, hypertension, osteoporosis and lots more in the list.

In India, especially in Assam millet utilization is limited to some pockets and found use by specific community only. However, millet can be blend well with common staples without any pronounced off flavours. They have potential to occupy as staples in life style suitable for ready to eat (RTE) foods, ready to cook (RTC) foods, mixes etc and there by render the lifestyle junk products 'non-junk' foods. Millets combined with regional legumes; oilseeds sprouted over 24 hours with one centi-meter sprout length could be even served as millet salad. Moreover, there is a wide scope for processing millets into breakfast flakes, RTE foods, staple convenience food, nutritional convenience foods and snacks. Millet is a delicious grain whose consistency varies depending upon cooking method; it can be creamy like mashed potatoes and fluffy like rice. Additionally, since millet does not contain gluten, it is a wonderful grain alternative for people who are gluten sensitive. The value-added products commonly prepared by the common people from cereals will be replace with millet to increase its utilization. Therefore, to increase the utilization of small millets as popular food, emphasis must be given to add millets in our indigenous thali though in smaller portion. However, different ethnic foods from millets are traditionally formulated and are consumed by specific communities of Assam like *Santhali* communities found in Kokrajhar district and Rajbongshi community and Muslim community found in Lower Brahmaputra valley zone (LBVZ) of Assam.

Materials and Methods

A survey was conducted among old aged village folk representing different communities of Assam consuming

millets as ethnic food since decades like Santhal's, Rajbanshi's and Muslim's from Lower Brahmaputra Valley Zone. The detailed information was collected on a variety of millet-based traditional food preparation, method of preparation and patterns of consumption of such products. Community based on the information provided by the local administrator selected areas. Field visits were conducted to investigate the availability of different millets in the respective areas. Focus Group Discussion (FGDs) was done to know about food habits, dietary patterns as well as millet consumption patterns. We have enlisted 19 numbers of millet-based traditional ethnic delicacies of Assam. The method of preparation and ingredient used, significance or origin of the product with vernacular and common name, shelf life, taste and cultural significance have been recorded for all the delicacies.

Results and discussion

The ingredients used along with method of preparation, vernacular names, common name, origin of the product, cultural significance of the product, shelf life and taste have been recorded for 19 ethnic authentic millet-based delicacies. The popular ethnic millet based food items consumed by Rajbongshi community are *Kaun bhaji bhat*, *Kaun Dhapra pitha*, *Kaun payash* which are shown in Table-1 and Figure-1a,1b and 1c. The Muslims belongs to lower Assam valley zone especially belongs to Kokrajhar, Dhubri and Bongaigoan district consumes millets in every alternate day stated by 67% of the respondent. The delicacies are diversified and was prepared usually in special occasions, celebration and rituals. 6 authentic ethnic food items are shown in Table-2 and Figure-2a,2b,2c,2d,2e,2f are *Kaun laddoo*, *Kaun bhapa sighara*, *Kaun halwa/luthuri*, *Kaun bor pitha*, *Kaun Anarkali/chandrapuli*, *Kaun akhoi/ kхой*. Further, the Santhali belongs to western part of Assam, especially in Kokrajhar district are found of millets and was consuming millets as staple food. They incorporate millets in varieties of dishes and every dish have some special significance. They usually prepare all their ethnic dishes from finger millets, and foxtail and proso millets are less in use. 10 main ethnic delicacies were recorded with traditional formulation were recorded for *Kode Dumbu*, *Belna Pitha*, *Sunum Pitha*, *Khapra Pitha*, *Kode Halwa*, *Kodu Pitha*, *Sukum Pitha*, *Ghula*, *Kodu bhat*, *Kodu Khichri* as depicted in the Tables-3 and Figure-3a,3b,3c,3d,3e,3f,3g,3h,3i,3j as shown below:

Table 1: Ethnic millet-based food items consumed by Rajbongshi community in Assam.

S. No.	Name of product of millet (local name)	Cultural/traditional significance of the product	Specific location of origin of the product	Ingredient used	Preparation method of the product/dish	Shelf life of the product	Taste
1	Vernacular name: <i>Kaun bhaji bhat</i> Common Name: Millet Fried rice	Consumed as breakfast or evening snacks	Rajbongshi's community of Bongaigoan/ Kokrajhar Assam	Millet grains, Onion, ginger, curry leaf, mustard seed, chick pea, green chili, beans, carrot (optional), mustard oil, cumin seed powder, ghee, turmeric and salt to taste.	Cook millet grains in a saucepan/cooker until soft and kept it aside for 8-10 hours to cool down the temperature completely. Take mustard oil in a pan, add curry leaf, mustard seed until it cracks, add chopped onion, vegetables, chick pea and fry it in medium to low temperature. Add the cooked millet into the frying pan and mix it well with the help of a spatula. Add a spoon of ginger juice, cumin powder, a spoon of ghee, green chili and salt and mix it in low to medium flame. Serve hot.	1 day	Salty and slightly spicy
2	Vernacular	Consumed as	Rajbongshi's	Millet (Foxtail/Finger	Soak millet and rice grain overnight in	1 day	Salty

	name: <i>Kaun Dhapra pitha</i> Common Name: Millet unleavened Dosa.	breakfast or evening snacks	community of Bongaigoan/ Kokrajhar Assam	grains), rice, salt and mustard oil	water and next morning grind it into fine paste. Add two spoon full of mustard oil and salt as per taste and cover it for another half an hour. Heat a flat pan and pour the batter in the middle of the pan and spread the batter with the back of the round spatula. Cover it with a lid and sprinkle some water over the lid to form adequate vapour inside the pan for uniform cooking and for soft unleavened dosa.		
3	Vernacular name: <i>Kaun payash</i> Common Name: Millet Porridge	Made in special religious rituals, annaprasan, etc. Consumed as breakfast or evening snacks	Rajbonshi's community of Bongaigoan/ Kokrajhar Assam	Millet grains Milk, Sugar, Nuts, Bay leaves, Cardamom.	Heat milk in a pan and add bay leaves and coarsely grinded cardamom. Add millet grains and half of the sugar, keeping the flame low. Allow it to cook and stir occasionally. When millet grains soften add remaining sugar and cook until required consistency is achieved. Add crushed dry nuts. The millet porridge is ready to consumed.	1 day	Sweet

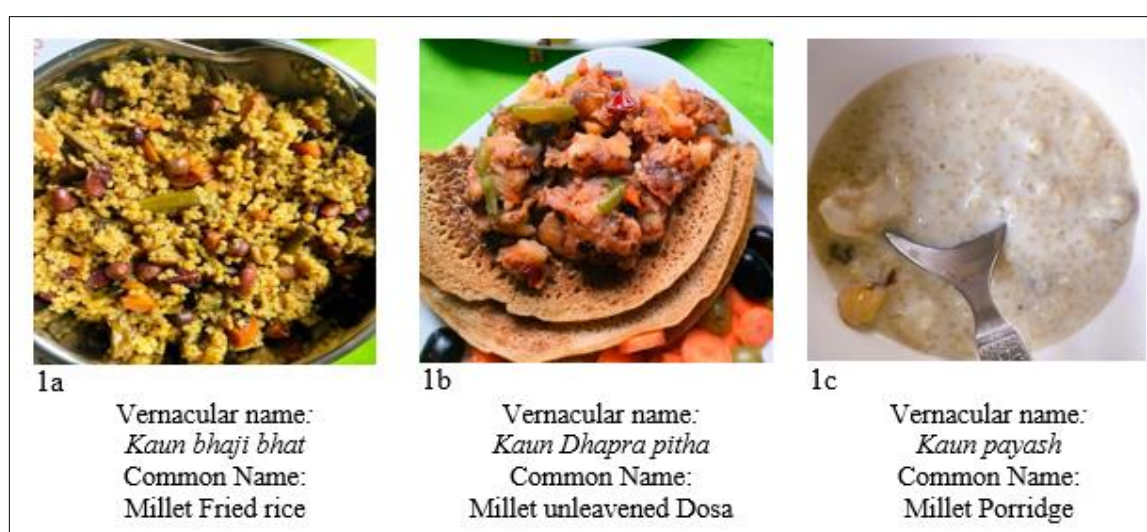


Fig 1: Ethnic millet-based food items consumed by Rajbonshi community in Assam.

Table 2: Ethnic millet-based food items consumed by Muslim community in LBVZ of Assam.

S. No.	Name of product of millet (local name)	Cultural/traditional significance of the product	Specific location of origin of the product	Ingredient used	Preparation method of the product/dish	Shelf life of the product	Taste
1	Vernacular name: <i>Kaun ladoo</i> Common Name: Millet ball	Made in special occasion like Bihu, marriage etc. Consumed with morning /evening tea	Muslims from Dhubri and Kokrajhar	Roasted Millet grains, jaggery	Heat a pan and allow jaggery to melt with water. When it is completely melting strain the solution with muslin cloth to remove dirt/sand if any. Again, heat the jaggery solution until thread like consistency achieved. Add roasted millet grains in jaggery solution and mix it well. Add ghee in the palm and take a portion to make ball.	1month	Sweet
2	Vernacular name: <i>Kaun sighara</i> Common Name: Millet steamed snacks	Consumed as evening snacks	Muslims from Dhubri and Kokrajhar	Finger Millet powder, Salt, Meshed potato, Ghee/oil, Green chilli, coriander leaves, cumin powder, ginger garlic paste	Take millet and refined flour. Add a spoon of ghee, water and knead to a soft dough. Cover it with a moist cloth. Roll it to a small flat uniform circle. On the other hand, for stuffing, boil potato, mesh it, add coriander leaves, green chili, chili powder, cumin powder, ginger garlic paste. Steam it and consume hot.	1 day	Salty
3	Vernacular name: <i>Kaun halwa/luthuri</i>	Consumed as morning breakfast	Muslims from Dhubri and Kokrajhar	Roasted and grinded millet powder. Milk, Sugar,	Heat ghee in a pan and add nuts, grinded millet powder, sugar and stir it in low flame. Add warm milk keep the flame low and stir it until adequate consistency is achieved.	1 day	Sweet

	Common Name: Millet porridge			Ghee, Nuts (optional)			
4	Vernacular name: <i>Kaun bor pitha</i> Common Name: Millet Fried pancake	Made in Assamese bihu, rituals and religious occasion etc. Consumed with morning/evening tea	Muslims from Dhubri and Kokrajhar	Millet powder Rice powder Jaggery Vegetable oil	Soak millet powder, rice powder, jaggery with milk/water to a thick consistency. Heat oil in a pan and pour the batter into the oil. Cook in medium to high flame until its turn brown, puffed and floats.	4 days	Sweet
5	Vernacular name: <i>Kaun Anarkali/chandrapuli</i> Common Name: Millet sweet snacks	Made during Bihu, Id, or in special occasions like marriage etc. Consumed as evening snacks	Muslims from Dhubri and Kokrajhar	Finger millet powder, Milk, sugar, Grated coconut, Oil for frying	Knead finger millet powder with milk. Add a spoon of ghee and knead well and roll it into flat round shape. On the other hand, for stuffing, grate a coconut, add sugar and heat it until small lumps are form. Fold the round shape into half and add stuffing and close the edged properly with wet hand. Fry it into low to medium flame.	5 days	Sweet and hard
6	Vernacular name: <i>Kaun akhoi/khoi</i> Common Name: Popped Millet	Made during marriage celebration, Bihu, Id etc. Consumed with milk as breakfast or at evening	Muslims from Dhubri and Kokrajhar	Millet	Take previous year healthy millet grains. Clean it properly. On the other hand, make a salt solution and sprinkle over the millet grain and mix it properly. Cover it for 10 minutes. Heat an iron <i>karai</i> (Pan) and heat clean and washed sand. When the sand is completely heated, add a handful of millet grain into the sand and stir it continuously. It will sputter. Sieve it with iron or steel mesh properly to separate sand from popped millet.	1 month	Taste like puff from rice or corn

**2a**

Vernacular name:
Kaun laddoo
Common Name:
Millet ball

**2b**

Vernacular name:
Kaun sighara
Common Name:
Millet steamed snacks

**2c**

Vernacular name:
Kaun halva/luthuri
Common Name:
Millet porridge

**2d**

Vernacular name:
Kaun bor pitha
Common Name:
Millet Fried pancake

**2e**

Vernacular name:
Kaun Anarkali/chandrapuli
Common Name:
Millet sweet snacks

**2f**

Vernacular name: *Kaun akhoi/khoi*
Common Name:
Popped Millet

Fig 2: Ethnic millet-based food items consumed by Muslim community from LBVZ of Assam.

Table 3: Ethnic millet-based food items consumed by Santali's community of Assam.

S. No.	Name of product of millet (local name)	Cultural/ traditional significance of the product	Specific location of origin of the product	Ingredient used	Preparation method of the product/dish	Shelf life of the product	Taste
1	Vernacular name: <i>Kode Dumbu</i> Common Name: Millet Ball	Made during festivals like marriage, christmas	Santhali Community, Kokrajhar, Assam	Millet powder, sugar, Jaggery, fresh coconut, cooking oil	Millet grained was grinded to fine powder. Add jaggery, fresh grinded coconut, sugar. Knead dough like texture and make small ball. Fry in cooking oil until dark brown in color.	3 days	Sweet and hard
2	Vernacular name: <i>Belna Pitha</i> Common Name: Millet base Roti	Consumed in breakfast or tiffin	Santhali Community, Kokrajhar, Assam	Fine millet powder, salt to taste, oil (ghee/refine), and water	Take millet flour, add a pinch of salt (optional), add Luke warm water slowly and knead it to soft dough. Cover it for half an hour and make small balls. Heat tawa and put one spoon of oil (optional) and make roti.	1 day	Salty
3	Vernacular name <i>Sunum Pitha</i> Common Name: Millet cake/ Malpuwa	Consumed in breakfast or tiffin	Santhali Community, Kokrajhar, Assam	Millet flour, sugar, water, soda and oil	Take millet flour, add sugar powder or melted jaggery. Pour enough water to make it fine paste and flowing consistency without any lumps. Heat sufficient oil in karahi. Place a spoon of batter directly into the hot oil. When its floats in the oil then turn it. Serve hot. Can be stored up to a week.	2 days	Sweet
4	Vernacular name <i>Khapra Pitha</i> Common Name: Unleavened Dosa	Consumed in breakfast or tiffin or snacks	Santhali Community, Kokrajhar, Assam	Millet powder, mustard oil, salt and water.	Take coarse millet powder; add water, salt, 1(one) spoon mustard oil. Mix all ingredients well till flowing consistency like dosa batter. Cover it with a lid and kept it rest for at least 2 hours. Heat Tawa (cooking Pan) and pour and spread the batter evenly and cover it with a lid to create steam. Unleavened dosa is served with chilly chutney, hot tea or with vegetable curry.	1 day	Salty
5	Vernacular name: <i>Kode Halwa</i> Common Name: Millet sweet dish	Consumed in special occasions/festivals like marriage, worshipping god, birthdays etc	Santhali Community, Kokrajhar, Assam	Millet grains, milk, sugar, bay leaf, cardamom, dry fruits.	Boil milk, add bay leaf, cardamom, sugar into boiled milk, add washed millet grain and stir it continuously till semi liquid consistency. Add dry fruits and serve hot.	1 day	Sweet
6	Vernacular name: <i>Kodu Pitha</i> Common Name: Steamed Millet cake	Consumed as breakfast or snacks	Santhali Community, Kokrajhar, Assam	Coarsely grinded millet, sugar powder or jiggery, coconut, Sesame powder	Take sufficient amount of coarsely grinded millet. Sprinkle little bit of water if the powder is too dry and cover it for half an hour. Place the powder in the lid of a kettle, add little bit of coconut powder, sugar or jaggery and sesame powder too and cover the lid with clean white cloth tightly and place the lid on the top of the kettle. On the other hand, boil water in the kettle and close the lid along with the mixture. The steam millet cake is ready after 5 min and is served with hot tea as snacks.	1 day	Sweet
7	Vernacular name <i>Sukum Pitha</i> Common Name: Millet steamed roti	Consumed as breakfast or snacks	Santhali Community, Kokrajhar, Assam	Millet powder, milk, sugar, tender leaf of banana, oil or ghee	Make a fine and soft dough from millet powder, powdered sugar, milk or water. Knead it properly and roll it into desired shape. Wrap it with tender banana leaf. Don't forget to roast the banana leaf a little otherwise it will tear while wrapping. Then place it above fire ball or above burning charcoal.	1 day	Sweet

					Serve hot with hot tea or milk.		
8	Vernacular name <i>Ghula</i> Common Name: Millet beverage	Consumed as beverages	Santhali Community, Kokrajhar, Assam	Millet, sugar and water	Soak millet in water for 12 hours. Make it into fine paste after removing the water. Add water or milk, cardamom and sugar into the paste. Stir it well and serve cold.	½ day	Sweet
9	Vernacular name <i>Kodu Bhat</i> Common Name: Steamed millet (whole grain)	Consumed as staple food like rice	Santhali Community, Kokrajhar, Assam	Millet, salt and water	Boil water; add millet and pinch of salt. Close the lid of the vessel and cook it till it get soft and edible like steam rice. Serve hot with any curry or dal and sabji.	1 day	Salty
10	Vernacular name <i>Kodu Khichri</i> Common Name: Millet Khichri	Consumed as staple food and served during worshipping god, marriage etc	Santhali Community, Kokrajhar, Assam	Millet, Moong dal, Carrot, beans, potato, onion, garlic, ginger, green chili and mustard oil, cumin seed, salt and turmeric powder.	Take equal amount of Millet and lentil i.e. green gram (<i>moong</i>) dal and wash it properly. Heat water in a vessel and add all ingredient i.e millet, <i>moong</i> and vegetable. Add salt, turmeric powder too. Cook till it gets thick consistency. On the other hand, heat oil in a <i>karahi</i> (Pan), add cumin seed, chopped onion, garlic, ginger, green chili. Pour the hot oil mixture into boiled <i>khichri</i> . Mix it properly and serve hot.	1 day	Salty and spicy



3a

Vernacular name:
Kode Dumbu
Common Name:
Millet Ball



3b

Vernacular name:
Belna Pitha
Common Name:
Millet base Roti



3c

Vernacular name
Sunum Pitha
Common Name:
Millet cake/ *Malpuwa*



3d

Vernacular name
Khapra Pitha
Common Name:
Unleavened *Dosa*



3e

Vernacular name:
Kode Halwa
Common Name:
Millet sweet dish



3f

Vernacular name: *Kodu Pitha*
Common Name:
Steamed Millet cake



Fig 3: Ethnic Millet based food items consumed by Santali tribes of Assam.

Conclusion

Assam, a northeastern state of India has several authentic ethnic millet-based food delicacies that have not been documented adequately. Moreover, after declaration of 'International year of Millet 2023', people are now become more aware of importance of millet consumption in daily diet but are unaware about value addition from these nutri-cereals called millets. Hence, documentation of these ethnic delicacies gives different ideas of food preparation as well as traditional formulation in correct way. Diversified products and nutrification in indigenous *thali* not only break monotony in routine diet but also make people nutritionally sufficient. Further, loss of these ethnic delicacies can be prevented only by increasing its availability and market value. An intervention of food science in optimizing the preparation method, improving hygiene parameter and making ready to eat and ready to cook products can be promising lucrative business in this sector for local people and may attract consumer from other part of the country.

Acknowledgement

The author offers special thanks to the *goan burha* and elderly aged people for sharing their local information and traditional knowledge, method of preparation on ethnic delicacies of millet-based food, lastly and most importantly the old aged women cook for preparing the recipes from millets and for their constant support and valuable time throughout the survey period.

Conflict of Interest

The authors declare no competition and conflict of interest.

References

1. Rao BR, Kumar MH, Nagasampige H, Ravikiran M. Evaluation of nutraceutical properties of selected small

millets. J Pharm Bioall Sci. 2011;3(2):277-279. doi:10.4103/0975-7406.80775

2. Khatoniar S, Das P. Physical and functional properties of some millet varieties of Assam. Int J Curr Microbiol Appl Sci. 2020;9(5):1508-1515. doi:10.20546/ijcmas.2020.905.171
3. Deshpande S, Nishad P. Technology for millet value-added products. In: Sood S, editor. Advances in millets: value chain and health benefits. Singapore: Springer; 2021. p. 241-259. doi:10.1007/978-981-16-0676-2_14