

TRADITIONAL RICE-HUSKING TECHNOLOGY OF THE BODOS OF ASSAM

¹ANISA BASUMATARY & ²DR. NUSHARBARGAYARY

¹PhD. Research Scholar, Department of History, Bodoland University

² Assistant Professor, Department of History, Bodoland University

ABSTRACT

In ancient times, Northeast Indian indigenous people used a traditional method for rice husking. It was an integral part of their daily domestic activities. The Bodos as an earliest settler of the Brahmaputra valley of Assam performed their own method of husking rice. Historically, leg-operated husking (dingkhi) and hand-operated mortar (ual) and pestle (gaihen) were two types of technologies employed by Bodos for husking rice. Besides rice, these technologies were also employed to pound other foodstuffs. But with the introduction of the mills and modern technologies the traditional method of husking rice is lost to a great extent. The paper will therefore concentrate on the conventional rice-husking practice among the Bodos, which employs a hand-powered mortar and pestle together with a leg-powered system that is generally constructed from wood, bamboo and iron.

KEYWORDS: Bodo, Tradition, rice, husking, Technology

INTRODUCTION:

The half of the world's population especially in the region between Asia and Africa considered rice as a dependable source of nourishment. India with its immense stretches of fertile soil and regular perennial rivers is regarded as a fertile region that eventually acts as a centre for agriculture.¹ Subsequently, leading India as the second largest producer of rice. Throughout times, human generation have been using quite a number of traditional husking techniques to produce rice from paddy. The paddy crop when reaches the appropriate maturity, it is harvested and beaten in order to detach the paddy from the panicle. Beating simply eradicates the spikelet and glumes from the plant. Then, to turn into edible rice, the paddy undergoes through a series of processing unit

which necessitated the application of diverse techniques.ⁱⁱ In accordance to it, stone grinding is regarded to be the oldest known prehistoric foodgrain processing techniques used by prehistoric human societies. Ancient saddle and quern artifacts excavated in different Neolithic sites present evidence of the grinding capacity of prehistoric people. Many aboriginal societies within Africa and Asia ethnographically documented using the very same technique.ⁱⁱⁱ

The Northeastern part of India specifically the state of Assam is regarded as the foremost rice growing state. The various communities and tribes that reside in Assam, such as Assamese, Bengali, Karbi, Rabha, Mishing, Dimasa and Deori, mostly deal with rice production. They evolved a number of traditional technologies for producing and processing rice as well as pounding other food items.^{iv} Similarly, Bodos are an aboriginal people of Northeastern India of Assam, belonging to the Tibeto-Burman family of Mongolian race. They possess their own culture, language, literature customs and religion^v. B.H. Hodgson initially coined the term 'Bodo' as an ethnological term to refer to the Meches, the Bodo speaking people in the Darjeeling district.^{vi} As stated by P.C Bhattacharya, 'The Boro or Boro-kachari belongs to the Boro (Bodo) sub-section of Bodo-Naga section under the Assam-Burma Group of Tibeto-Burman branch of Sino-Tibetan or Tibeto-Chinese speech family'.^{vii} The Bodos are concentrated in some regions of Assam and neighbouring Indian states like Meghalaya, Arunachal Pradesh, Nagaland, West Bengal, Tripura etc.^{viii} They are in sheer numbers in the districts of the northern region of Dhubri, Goalpara, Barpeta, Nalbari, Kamrup, Darrang, Sonitpur, Lakhimpur, etc.^{ix} Yet, their current Bodo Land Territorial Region (BTR) of Assam is where they predominately existed.

The Bodos like other communities of Assam, believe that rice is a symbol of fertility, treasures and prosperity.^x They viewed rice as the incarnation of goddess Mainao Buri or Lwkhi identical with Hindu goddess Lakshmi. In the Bodo community, it is customary to use rice in all forms of worship. Rice is used in festivity and reverence of all ceremonial occasions.^{xi} In fact, the Bodos have skilfully acquired the knowledge of manufacturing their own tools for the production of rice as well as for hunting, fishing etc., using natural resources that are crucial for their survival and way of life.^{xii} The fourth Bodo fathers came up with two distinct technologies for husking rice such as the hand-operated mortar method and the leg-operated method. The ual (mortar) and gaihen (pestle) are utilized in the hand operator mortar method while the dingkhi is used in the leg operated method.

OBJECTIVE:

The primary objective of this paper is to document, analyze and interpret the traditional rice-husking methods of the Bodos, paying attention to their technical design, raw materials, manufacturing process and socio-cultural importance in the Bodo society.

METHODOLOGY:

The methodology adopted for this paper is based on historical approach. It includes both Primary and secondary sources. Primary sources are entirely based on interviews, surveys and conversations with village elders and other individuals who are well-versed in agricultural tools and practices in the BTR region and the secondary sources are collected from various sources including books, journals, articles, and audio recording etc.

RESULT AND DISCUSSION:

Since ancient times, the Bodos are said to have entirely depended on the forest for their survival. They prefer to reside in the surrounding hills, forests, marshland, lakes and rivers in order to hunt, fish and gather a variety of foods.^{xiii} They utilized forest resources to construct their adobe, to manufacture various types of furniture and utensils needed for everyday household tasks. The Bodos are essentially nature worshipers. They believe that nature possesses a latent force that is capable of having a significant impact on societal interactions. Indeed, they believed that the nature is the source of both happiness and sadness. Every activity that Bodos undertake are directly linked with nature. Therefore, the men folk prior to entering into the forest to gather food items and felling the trees, they worship the forest by offering a pair of Goi (areca nut), Phathwi (betel leaf) and Bibar (flower) to the forest deity as the charge of collecting materials from the forest.^{xiv}

In the same way, traditional rice-husking technology used by the Bodo community are largely forest-based. Hand-operated mortar (ual) and pestle (gaihen) and Leg-operated husking (dingkhi)^{xv} are the two types of traditional husking technologies practiced by them. They have been using these technologies from the beginning of time having inherited them from their predecessors.

HAND-OPERATED MORTAR (UAL) AND PESTLE (GAIHEN) METHODS AND ITS MAKING PROCESS:

The hand operated mortar and pestle is one of the methods of husking rice which is adopted by the Bodos. It has also been regarded as an indispensable component of their traditional society. The making of the hand operated mortar begins with the process of choosing the appropriated wooden log of large to medium size which were readily available in the forest. Since immature trees are more likely to shatter early, they tend to prepare to utilize fully mature trees. Among the trees like Dumbrukhaosa (*Ficus racemosa*), Gambari (*Gmelina arborea*), Sal (*Shorea robusta*) is regularly used for making hand operated mortar.^{xvi} Tools created from these trees are considered sustainable and can be used by the following generation. The first process of making mortar is done by selecting and felling a hardwood log in the nearby forest. Thereafter, it is cut in a cylindrical form by using different metal tools such as Ruwa (axe). Then the outer bark of the tree is removed by using instruments such as Konabital

(roughing gouge) and Hathura (hammer). The process of curving the outer part and then the inner part is carried out where the wooden felling is done. Afterward, the unfinished cylindrical form of wooden log is brought to the home. Remaining steps such as smoothing the surface and adding a final touch and polishing by using instruments like konabital and hathura are often completed at home. The shape of the hand operated mortar is of hourglass shape with a top being hollow and is said to be constructed up to a human knee or about 40 cm in height having a diameter of 140 cm and depth of 18 cm.^{xvii}



Fig:1 Hand operated mortar (Ual)

(DaukinPatgaon village, Kokrajhar)

In contrast, the Bodos, used the sal tree to construct the pestle. The interior part of a tree is applied to make a pestle. Using a strident axe the tree trunk is cut down horizontally into small poles. Subsequently, a metal tools like khukhri (broad-bladed knife) and sikhakhongkhai (sickle) is used for shaping the poles. The Bodos uses the broken piece of bottle glass that served as a sand paper during contemporary time, for smoothing the surface with a final touch and turning it into a pestle. Then, in the utmost lower portion of the pestle where the pounding will be carried out, sama (iron ring) is being affixed.^{xviii} The pestle that has sama is considered to be of great value and significant as it brings more effective work as compared to a pestle deprived of an iron ring. In order to facilitate grabbing the usual pestle construction has a regular tapering shape in the middle and wider girth at both the ends. The shape of the pestle is of long cylindrical shape with average height of 120-130 cm and a width of 22 cm. The iron ring which is fitted at the end of the circumference is of roughly 20 cm.^{xix}



Fig:2 Hand operated pestle (Gaihen)

(Rabangguri village, Baksa)



Fig:3 Iron ring (sama) affixed to the pestle.

(East Maoriagaon village, Kokrajhar, Assam)

BELIEFS AND PRACTICES ASSOCIATED WITH HUSKING RICE:

At the initial stage while the paddy goes through maturation, the guardian of the family visits the paddy field early in the morning, where they sprinkle divine water and offer prayers to Mainao Buri (Hindu goddess Lakshmi) and Mainao Bwrai (Hindu god Vishnu) before harvesting a small quantity of paddy with a khasi (sickle). Then, the harvested bundle is once more sprinkled with holy water and is stored in the Bakhri, a traditional house for storing paddy. This ancient custom in the Bodo society is referred to as Mainao Lainai or Aglainai (bringing Mainao or Lakshmi home from the paddy field)^{xx}. After one or two weeks are over, the paddy is harvested and allowed to air dry in the open sun. The sun-dried paddy is then transferred to the Bakhri for storage. In fact, the homes which do not comprise bakhri, generally used to store the paddy in Duli. It is a grain storage area almost 6-7 feet in height made using split bamboo knotted into large basket shape.^{xxi} The stored paddy is withdrawn only to husk in order to generate edible rice. As per the traditional rituals, the Bodos before taking out the paddy from the granary for husking, they sprinkle holy water to the Bakhri and to oneself and insert an egg and a Shaligram stone inside it (granary) as a token of offering to the Mainao Buri and Mainao Bwrai, respectively^{xxii}. In accordance to the cultural beliefs of their time the individual cannot retrieve the stored paddy at any given moment. Between Magwand the month of Bwisagu, the individuals are forbidden from touching the granary because it is believed that doing so could enrage the Mainao Buri or Lwkhi upon the owner and the paddy might get over easily.^{xxiii}

The husking of rice with hand operated technique is typically carried out by the labourers particularly women. The Bodos traditional rice husking procedure involves two to three rounds (if needed). After extracting the paddy out of the granary, prior to husking paddy is let to sun-dry. The required quantity of paddy dried under sun is then placed into the mortar and the grains are pounded with a pestle until detached from the chaff. The

pounded rice is then deposited in a khada (store bucket) from which it is taken and put into a songrai (winnow) and winnowed until husked and semi-husked rice is separated. But to achieve complete husking, the semi-husked rice is pounded until the whole grains seem fully husked. After that, the grain is sieved with a sandri (a form of sieve) which separates the long and broken grains.^{xxiv} The fractured grain also known as *ingkur* along with *jujai* (rice husk) and *gundwi* (rice husked powder) is generated while husking of rice. The Bodos do not abandon these components instead they utilize *ingkur* for preparation of *jou* (rice beer), *emao* (yeast starter cake)^{xxv} and to feed domestic animals such as *Oma* (pigs), *Hangsw* (duck), *Dao* (fowl) and other birds. Besides, *gundwi* is also used to feed pigs, which are raised by each Bodo household and are a very significant aspect of their culture. *Jujai*, on the other hand is utilized as a fertilizer in growing turmeric, ginger, and other plants.^{xxvi}

Apart from using *ual* and *gaihen* as a rice husking tool. They use this deficiency of technology for various needs like grinding different species, leaf extraction, crushing pulses such as *assobai*, *sibing* etc. In addition to that, utilisation of *ual* and *gaihen* is unavoidable in most of their traditional food items of the Bodos. Among them mentioned may be made the name of *Napham*, a conventional fermented food preparation made from local arum plant named 'thaso' and 'nagwran' (dried fish) and *Ondla*, a curry prepared with *on* (rice flour), spices and sometimes with vegetables or chicken. *On* is produced traditionally by pounding the rice through mortar and pestle.^{xxvii} Both *Napham* and *Ondla* have many traditional social values and norms in their society. For instances, *Ondla* curry has a significant role in their traditional wedding called "Hathasuni Khurnai". Without the *ondla* curry the traditional marriage of the Bodos cannot be performed. In the *Hathasuni Khurnai* marriage the bride cooks this dish that involves using rice flour and chicken without smearing any spices. In this ceremony all the processes of making *ondla* is done solely by her including pounding of rice for *on* (pounded rice powder) in the mortar. The cooked meal is then presented before the god and goddess as well as to the bridegroom at their wedding day.^{xxviii}

The hand-operated mortar and pestle held as an essential part in Bodo culture. Just like in the given case, the popular festival known as *Domasi* is being celebrated throughout the month of *Magh* (Jan-Feb). In other districts, the same celebration is referred to as *Domasi*, *Magw Domasi*, etc. However, they primarily used the word *Magw*. Consuming variety of cuisine made from *on* (rice flour) and *sibing* (sesame seeds) such as *enthao*, *sourai*, *laru*, *phithalaodum*, *sithao*, etc including *gladoos* (Indian sweets) prepared from coconut is one of the main key features of the festival. Here, the chief ingredients of the *pithas* are rice flour and sesame seeds. In order to crush the ingredients for *pithas*, the females utilize the hand-operated mortar and pestle. Furthermore, during the *Domasi* festival, the *ual* (mortar) and trees such as *areca nut*, *jackfruit*, *litchi*, *mango* etc., are tied with *Jigab dirung* (strings of hay) before the birds and other animals are awakened. It is a kind of traditional ritual in which

people invoke the gods and goddesses for favours to minimize the rice breakage of ricewhile husking as well as to enhance fruit development and prevent it from deteriorating.^{xxix}

Additionally, a folk song associated with 'ual' and 'gaihen' is composed, reflecting its significance in culture of the traditional Bodo societies.

The song beneath is a portion related to 'ual' and 'gaihen':

Dumbrukaosaniualjwng

Sal sirinigaihenjwng

Bihari sanwijwngdhumdhumdhamdham

Soulaibaihonwi Alou mwnha;

Soulaibaihonwi Alou mwnha^{xxx}

English translation;

'With mortar constructed from ficus racemos tree and pestle made from shorearousta tree, the co-wife in unison, name Alou began to pound.'

The Bodos store the hand operated mortar and pestle in the sipikotta, a traditional dwelling typically constructed for the purpose of carrying out husking activities and to shield the tools from any sort of damages inflicted by dust, sun and rain. Even certain stringent norms were to be followed while keeping the mortar and pestle. For example, the mortar is to be stored upside down and the pestle on the side on which pounding took place should be kept upright by placing it against the wall. Additionally, the Bodos also have long held firm beliefs in respect to mortar and pestle. For instance, individuals were strictly forbidden from sitting on the mortar, as it is believed that, if they do so the paddy would be devoured by rats and frogs.^{xxxii}

Leg-Operated Husking Method (Dingkhi/ Dheki)

The leg operated method also identified as Dingkhi/Dheki is regarded as a traditional method of husking rice common in Eastern and Northeastern part of India notably Assam, West Bengal and Odisha.^{xxxiii} Dingkhi has been a part and parcel of village life for centuries. The Bodo tribe of Assam, employs this type of another traditional technology for the husking of rice. And ranked it to be of great importance specifically by the inhabitants residing in the Baksa and Udalguri districts. As per D. P. Barooah, all rural families make use of a

wooden tool known called a dingkhi to dehusk grain by pounding the grain with their foot. He also further added, that the people in the rural areas finds dingkhi an essential part of all household requirements and utilize it to husk approximately three-fourths of all husked rice in rural regions.^{xxxiii}

PROCESS OF MAKING LEG-OPERATED HUSKING METHOD:

Dingkhi is made using siri, the inner section of the developed tree. It is constructed with such trees as Gambari (Gmelina arborea), Sal (Shorea robusta) and Khantal (Jackfruit). A dingkhi consists of a massive and heavy wooden beam that measures 150-198 cm long and 20.32 cm wide, supported by a pedestal that acts as the fulcrum of 20 cm and at the other end of the lever is a vertical wooden cylinder that serves as a pestle.^{xxxiv} A short pestle attached to the lever head measures approximately 35-40 cm long.^{xxxv} Furthermore, similar to the gaihen (hand-operated pestle), the leg operating pestle has a sama (iron ring) mounted on it that is 18-20 cm long, to enhance productivity when working. Moreover, a mortar is designed to pound grains by creating a pit. The pit of a mortar often tends to change from location to location, they are usually constructed from thick wood or huge stones and are curled out into where the pestle is dropped and the grains are pounded repeatedly. The pit of a mortar is usually inscribed between 5-6-inch deep. The mortar is then plastered with mud, submerging it below the ground although leaving the hole open.^{xxxvi} Contrary to the hand-operated method every component of the dingkhi should be made with great care considering the measurement of each and every part of the body weight and size in order to get a higher pounding outcome.^{xxxvii}



Fig: 4 Pedestal that serves as fulcrum
(Borgaon village, Baksa)



Fig:5 Short pestle affixed at the lever head
(Borgaon village, Baksa)



Fig: 6 Dingkhi/ Dheki

(Thelamara village, Udalguri)

BELIEFS AND PRACTICES ASSOCIATED WITH HUSKING RICE THROUGH DINGKHI/ DHEKI:

This type of husking equipment (Dingkhi) is operated by applying leg pressure on the lever heads back end that is attached to a pestle. Then the lever head is lifted high and quickly released in a rapid motion, crushing the grains as the pestle falls with tremendous force into the mortar. This procedure breaks the grains and separates it from husk. Following that, the husked rice is transferred from the mortar pit to a khada (bucket for storage). With the aid of a series of tools, including as a sandri (sieve) and asongrai (winnow), the grain and chaff are separated by hand. Such grain separating tools are most often constructed from split bamboo. Dingkhi functions similarly to a game called see-saw, in which one end goes down when the weight increases and the other goes up when it does the opposite.^{xxxviii} In order to operate this equipment two labourers are ideal, one of whom paddles frequently and another who pushes and takes away the paddy from inside the mortar. The leg operated technology is typically operated by women. However, the development of this technology is carried out by the male folk. Besides rice husking such as hand operated mortar and pestle, dingkhi is also employed in crushing pulses and herbs, grinding species, making rice flour and lots of other things.^{xxxix}

According to traditional beliefs among the Bodos, the Dingkhi is supposed to be constructed in an east-west direction, where the person who operates it is facing the eastern side. Unlike the hand-operated practice, the dingkhi remains fixed in one location. It is thus located in a separate room that is made primarily for its storage purposes, where husking activities is also conducted. However, if there is insufficient area, the individuals constructed it on the veranda of the kitchen. Exposure to direct sunlight and rain is the most distinctive reasons for its deteriorating. Therefore, the proper way of safeguarding it from damaging is to cover it with a large piece of fabric.^{xl}

The usage of dingkhi has significantly decreased as a result of the development of modern technologies since traditional methods cannot compete with contemporary machinery. It is a reflection of the way in which dated techniques are often dominated by more recent and more advanced technologies. Dingkhi is occasionally utilized in cultural events nowadays to preserve its memory. For instance, it is applied in the Domasi festival, that commemorates the beginning of a new harvest.^{xli}

CONCLUSION

Over time, in the conventional Bodo society, the hand-powered and leg-powered techniques have been a vital means of husking rice and other edibles. But owing to the arrival of the modern technology like electric mill and other machinery, rice husking using traditional technology has been on the decline. Since rice husked by electric mill takes less time and less man power, it could be said that the users of traditional technology have decreased a lot.^{xlii} However, the inhabitants of the rural areas do not solely use modern mills. This can be because of various reasons like poor transportation, improper electricity, grain quality, fewer opportunities for broken grains, cost factor etc. According to research, it has been identified that the people of Kokrajhar and Chirang districts use the hand-operated technique while people from the districts of Baksa and Udalguri have used leg-operated husking techniques^{xliii}. Also, it is seen that some richer individuals living in the districts of Baksa and Udalguri obtained both methods of husking. In addition, the availability of contemporary mills has totally replaced the old husking process as use of this form of ancient technology within urban areas is only available for these seasonal festival such as Domasi.

END NOTES:

ⁱYehia, M.E and Katab, A.R., Effect of Hulling Machines on Hulling Characteristics and Quality of Rice Grains, *Misr J. Ag. Eng*, 2018, p.259.

ⁱⁱManickavasaga, A, et al., *Rice Milling Technology to Produce Brown Rice*, Springer International Publishing, 2017, p.3.

ⁱⁱⁱTakaoglu T, An early Neolithic quern production site in NW Turkey, *J Field Archaeol*, 30 (4), 2005, pp.419-433.

^{iv}Bora, A., Traditional knowledge and method of various rice preparations in Assam, *Indian Journal of Traditional Knowledge*, Vol. 19(4), 2020, p. 897.

^vNarzary, S., Traditional Agricultural Tools of Boros: Used in Rice Cultivation, *Review of Research*, Vol.8, Issue. 6, 2019, p. 1.

- ^{vi}Hogdson, B.H., Essay the First: On the Koch, Bodo and Dhimal Tribe, Thomas Baptist Mission, Calcutta, 1847, p. 141.
- ^{vii}Bhattacharya, P. C., A Descriptive Analysis of the Boro Language, G.U,Publication Guwahati, 1977, p.8.
- ^{viii} Boro, M., A Glimpse of the Rich Heritage of the Bodo people, Sushraoti- The Saraswati, Souvenir, The Bodo Sahitya Sabha & The Delhi Bodo Association, Guwahati, 2000, p. 103.
- ^{ix}Kundu, D. K., The State and the Bodo Movement in Assam, A.P.H. Publishing Corporation, New Delhi, 2010, p. 30.
- ^xBaro, M., A Study on Food Habits and Traditional Knowledge System of The Bodos, 2022, p. 89.
- ^{xi}Singh, O.R and Brahma, N.G., Rites and Rituals of The Bodo in Agricultural Operation, Think India, Vol. 22, Issue-3, 2019, p.267.
- ^{xii}Brahma, M. K., Traditional Rice Cultivation of the Bodos, International Journal of Novel Research and Development, Vol.4, Issue 3, 2019, p. 45.
- ^{xiii}Baro, M., Op.cit., p. 27.
- ^{xiv}Ibid.,p. 28.
- ^{xv}Brahma, N and Daimary, L., The Traditional Agricultural Tools and Technology used by the Bodos, IOSR Journal of Humanities and Social Science (IOSR-JHSS), Vol. 22, Issue 5, 2017, p.69.
- ^{xvi}Interview with Chakradhaj Narzary, Age- 61, Occupation- Cultivator, Vill- East Maoriagaon, P.O- Kakormari, Dist- Kokrajhar, BTR, Assam on 24/11/2024.
- ^{xvii}Interview with Jayanta Mushahary, Age- 77, Occupation-Cultivator, Vill- South Patgaon, P.O- Patgaon, Dist- Kokrajhar, BTR, Assam on 30/11/2024.
- ^{xviii}Interview with Siranjit Basumatary, Age- 54, Occupation- Businessman, Vill-Mainaopuri, P.O-Titaguri, Dist- Kokrajhar, BTR, Assam on 26/12/2024.
- ^{xix}Khongsai, L and Manibabu M., Traditional rice-husking technology of the Kukis of Manipur, India, Indian Journal of Traditional Knowledge, Vol 22(1), 2023, p. 204.
- ^{xx}Brahma, K., Aspects of Social Customs of the Bodos., BinaLibrary, Guwahati, Assam, 2008, p. 60.
- ^{xxi}Bargary, N.,Ethno History, Bodoland University, 2017, p. 74.
- ^{xxii}Interview with Birhang Mushahary, Age- 56, Occupation- Businessman, Vill- RupatiNwgwr, P.O- Kokrajhar, Dist- Kokrajhar, BTR, Assam on 05/01/2025.
- ^{xxiii}Basumatary B.C., Kinds of Bodo Festivals: The Brief Survey Reports on The Bodo Festivals, 2020, pp.98-99.
- ^{xxiv}Narzary, S., Op. cit., p.4.
- ^{xxv}Basumatary, T.K and et.al., Jou: the traditional drink of the Boro tribe of Assam and North East India, Journal of Scientific and Innovative Research, 2014, p. 239.

- ^{xxvi}Interview with Dade Mushahary, Age- 53, Occupation- Cultivator, Vill- South Patgaon, P.O- Patgaon, Dist- Kokrajhar, BTR, Assam on 05/01/2025.
- ^{xxvii}Narzary, J. et.al., A study on Traditional fish preservation method and certain ethnomedicinal fishes of Bodo tribe of Kokrajhar District, Assam, India, International Journal and Scientific Research in Biological Sciences, Vol.6, Issue. 5, 2019, p.67.
- ^{xxviii}Brahma, K., A Study in Cultural Heritage of the Boros, BinaLibrary, Guwahati, Assam, 2008, p. 87.
- ^{xxix}Swargiary, B., An Overview of Fair and Festivals of the Bodos and Participation of Womenfolk, ShodhKosh: Journal of Visual and Performing Arts, 2022. pp.49-50.
- ^{xxx}Basumatary, Ganakhanta., Folk Song.
- ^{xxxi}Interview with Chakradhaj Narzary, Age- 61, Occupation- Cultivator, Vill- East Maoriagaon, P.O- Kakormari, Dist- Kokrajhar, BTR, Assam on 24/11/2024.
- ^{xxxii}Nayak, S and Harijan, G., Historical Analysis on traditional Tools and Technology for Farming and Food Processing: A Study of South Odisha, Palarch's Journal of Archaeology of Egypt/Egyptology, 2021, p.1634.
- ^{xxxiii}Barooah, D.P., Gazetteer of India Assam State (Goalpara District Gazetteer), Government of Assam, Gauhati, 1979.
- ^{xxxiv}Khongsai, L and Manibabu M., Op. cit.,p. 205.
- ^{xxxv}Interview with Behula Boro, Age- 54, Occupation- Housewife, Vill- No.1 Chapaguri (Gwjwnpuri), P.O- Chapaguri, Dist- Chirang, BTR, Assam on 07/01/2025.
- ^{xxxvi}Interview with Romeo Kumar Basumatary, Age- 30, Occupation- Asst. Professor, Vill- Pakaribari, P.O- Orang, Dist- Udalguri, BTR, Assam on 10/01/2025.
- ^{xxxvii}Khongsai, L and Manibabu M, Op. cit., p.206.
- ^{xxxviii}Brahma, N., Traditional Tools and Technology of the Bodos, Bodoland University, 2018,pp.86-87.
- ^{xxxix}Interview with Chaya Rani Basumatary, Age- 58, Occupation- Housewife, Vill- Borgoan, P.O- Barmajra, Dist- Baksa, BTR, Assam on 15/01/2025.
- ^{xl}Interview with Dipali Narzary, Age- 59, Occupation- Social Worker, Vill- Mwinamata Pathar, P.O- Mwinamata, Dist- Baksa, BTR, Assam on 15/01/2025.
- ^{xli}Interview with Mina Boro, Age- 49, Occupation- Housewife, Vill-Randhanipara, P.O-Betbari, Dist- Baksa, BTR, Assam on 15/01/2025.
- ^{xlii}Interview with Sanjib Basumatary, Age- 40, Occupation- Businessman, Vill- Thelamara, P.O- Orang, Dist- Udalguri, BTR, Assam on 24/01/2025.
- ^{xliii}Interview with Gabai Boro, Age- 50, Occupation- Housewife, Vill- Singimari, P.O- Khoirabari, Dist- Udalguri, BTR Assam on 24/01/2025.