



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

A Review on Traditional Indigenous Agricultural Practices of North East: With Special Reference to Manipur and Nagaland

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Abstract:

This review paper studies the various traditional practices of the North East region. The methods of farming system of the region seem to be homogenous with slight variations. Agriculture is not only an economic activity; it is the central theme of the cultural identity but sadly there is a rapid decline in the traditional practices which may have a far-reaching adverse impact socio-economic system of the communities of North East. Jhum cultivation is found to be the most common method of cultivation along with terrace rice fields along the hill slopes. Besides rice, many other food crops are grown traditionally to meet the needs and not commercialize but with various socio-economic changes, the traditional practices and food crops are on the decline. There is diversification of crops through modernization with the intention to commercialize.

Key Words:

Jhum, wet terrace fields, sustainability, traditional knowledge system, homegarden

North East India is a gold mine and throne of traditions and culture. It is a region inhabited by numerous tribes and communities with similar practices and rituals. One of the most prominent and common traditions that is observed to run through all the tribes and communities of the region is the agricultural practices.

It is an agrarian economy where most of the tribes are observed to practice Jhum cultivation. Wet terrace rice farming is also practiced extensively by many of the communities. The agricultural practices of the indigenous tribes have been developed over the centuries through observation and experiences suitable to the topography and climatic conditions to produce and meet the needs of the community. The tribal communities are still practicing the traditional methods of cultivation, using indigenous implements. The production is normally for self-consumption and commercialization. Rice is still the most important crop. There are other crops cultivated in the Jhum field or in the dykes of the terrace or small horticulture farms or in the kitchen gardens.

But over the last century changes can be observed in the pattern of agricultural practices and the purpose of cultivation. Agriculture is still the most important source of livelihood, and employment but there seems to be a shift in the preference for other employment opportunities and source of income.

The Traditional indigenous practices

G. Hiamguanglung Gonmei (2013) in his article "Hills Economy of Manipur: A structural change" points out the decline of primary sector and the rise in the importance of tertiary and secondary sector in Manipur economy. Agriculture is still the backbone of the economy but it is still very traditional oriented. The problems of agriculture such as small scale, traditional knowledge, lower input and productivity, lack of modern institutions, etc. are highlighted but with the acknowledgement of diversification into cash crops. But the growth has been hampered by poor infrastructural facilities. It is also pointed out that the poverty among the population is due to under utilization of their natural resources and lack of infrastructure. Among the

tribal communities, land is an asset as well as their identity. It was concluded that growth and development of the hills area is only viable through institutional support of the socio-economic conditions.

Moirangthem Monica Devi (2018) opines in “Agricultural practices and the changing pattern of Land holding system from Pre-colonial to colonial Manipur” article that agriculture in the valley is wet rice cultivation in the valley and Jhum cultivation in the hills but in both areas it is dependent on Monsoon. The article articulates the different methods of cultivation practice in the valley such as Punghul, Pamphel and Lingthokpa, and the hills such as terrace and Jhum cultivation in Manipur. It also made a mention of the significant contribution of the Muslim community in the agricultural practice such as the use of buffalo and plough, transplanting, etc. in the valley. The linkage of Jhum cultivation to the socio-economic and culture of the hill people and its sustainability. The article also brings to light the land ownership system under the king and the changes introduced by the colonial power by abolishing the compulsory service system “lallup” and introducing the cash revenue tax system both in the valley and the hills. The revenue was collected through the “lakpas” and “lambus”. The hills were divided into territories for the purpose of collecting house taxes.

Leishangthem Geetarani Devi & SM Feroze (2019) in “A district level sustainability of rice farming in hilly region of Manipur” writes about the sustainability of agricultural practices in the hill districts of Manipur. It states that the economic indicators shows that Ukhrul district is the most sustainable while Chandel is the least. All the districts of the state are found to be moderately sustainable economically and socially but ecologically highly sustainable. Thus, the paper concludes that to maintain sustainability, it is critical to improve the economic and social indicators.

Kalyan Mandi & Ritu Chakravarty (2020) writes of “Tribals in Agriculture” advocating how the traditional agrarian practice of the indigenous farmers can play an important role in the sustainable and organic farming need of the present time. It highlights the traditional wisdom of dependence on the natural environment to meet their needs. The article also brings to light the challenges and how the younger generation are migrating to other sectors due to the low productivity of agriculture. Tribal women is observed to make significant contribution to the economic activities but yet are not acknowledged. The indigenous technical Knowledge (ITK) has been developed and practiced by the tribals through experience and observation and has been pass down through generations. Thus, the article opines that the traditional wisdom and practices must be preserved and not uprooted through various training and awareness programs.

Tonlong Wangpan & et.al (2017) in their article “Tribal agriculture: Tradition in transition in the Indian Eastern Himalaya” writes of the indigenous knowledge system of the tribal communities in the midst of the challenging terrain. The survey of the paper indicates that different communities have similar agro-ecological management system by dividing the land into six categories: settlement area, plantation sites, kitchen garden, community forest, sacred groves, and cultivable land. Jhum is found to be the most prominent method of cultivation. It states that sowing and harvesting are the most important agricultural activities which is preceded and followed by important rituals and festivals. There are many challenges but the paper states that traditional practices are sustainable because the productivity is fairly high.

LC De (2020) writes in “Traditional knowledge practices of North East India for sustainable agriculture” that indigenous Technical knowledge about agricultural practices is developed over generations through experience. The agriculture practices in the North East India is largely organic. The article highlights different farming system of the North East: Jhuming, Filed crop production, Double cropping of rich, multiple cropping based production system, Bun system of cultivation, Rice-fish system of apatani plateau, Bamboo drip irrigation system, Alder based agriculture in Nagaland, ZABO system, large Cardamom plantation in Sikkim, Diversifies hill horticulture, Rattan cultivation as a part of shifting cultivation, agroforestry based production system, and Traditional medicinal practices. These different systems not only positively impact productivity but also in the preservation of the indigenous culture and traditions.

Lh. Seitinthang (2014) in “Cropping pattern of North East India: An appraisal” writes of the factors such as topography, soil, climatic conditions, etc. influencing the agriculture conditions in North East. The paper states that Shifting cultivation as the most significant practice which is intensive but subsistence. It is said that 70% of agriculture in North East is intensive and multi-cropping in nature. Rice is found to be the principal crop beside other supplementary food and cash crops. The changes observed in the agricultural practices of North East is attributed to the cultural and physical changes.

Amitkumar Singh Akoijam & Mirinchonme Mahongnao (2018) reviewed the significance of Shifting cultivation among various tribes of Nagaland and Manipur in their paper “The challenges of adopting innovative agricultural practices under shifting cultivation in Northeast India”. Shifting cultivation is practiced because of the geographical location and lifestyle and it is closely linked to the socio-economic and cultural life of the tribes. It is observed that there is diversification and innovative method of cultivation and

the indigenous shifting method has been slowly replaced but the change is slow. The paper has recommended for the sustainability of shifting cultivation such as; choice of shifting location with least environmental impact, introduction of more cash crops, awareness campaign, public-private partnership, and tribal rights and culture must be respected and protected.

B.C. Barah (2007) propagates “strategies for Agricultural development in the North-East India: Challenges and emerging opportunities”. The article writes that most of the states in the region are struggling due to resource and infrastructure constraints. The region also struggles with limited market and poverty and it is deteriorating due to low productivity of the farms due to various socio-economic, technological and environmental factors. Some of the strategies recommended for the agriculture development in the region are: rice plus strategy, agriculture plus strategy, explore organic farming, agro-processing sector, innovative capacity building, research and development, build data base, networking, vibrant market system, private-public partnership, etc.

Indigenous tribal practices: Manipur

Tuisem Shimrah & et.al. (2018) studies the “Role of traditional homegardens in biodiversity conservation and socioecological significance in Tangkhul community in Northeast India.” amidst the rapid changes in the ecosystems. The paper writes that 73 plant species of economic, social and cultural values in which vegetables are found to be the largest. Most of the crops in the gardens are sown deliberately but some of them are self-regenerating. Traditionally crops are nurtured and cultivated to meet the needs and not for commercial purpose. Home gardens are a traditional knowledge of biodiversity management.

Chamgailiu Gonmei (2018) examined the “economy of Rongmei Naga tribe of Manipur” in which land is identified as basis of their livelihood and pivotal to the tribal economy. The traditional system and practices ensure the welfare and the productivity of the land. Village land is divided into settlement area, reserve forest, cultivation area, and unreserved forest. Food supply is from agriculture and forest and the most important method of cultivation is Jhum cultivation. It is observed that inspite of abundant of land, the produce is sufficient only for self-consumption and commercialization but this pattern of cultivation and production is surely shifting and changing. Modernization in lifestyle, transportation, education, etc. are significant factors in the changes witnessed among the Rongmei tribe. The traditional subsistence economy is slowly shifting to modern mode of commercial economy.

Lh. Seitinthang (2012) investigates the “Indigenous agriculture system of kukis in Ukhrul district”. It states that agriculture in this area depends on monsoon. The kukis widely practice shifting cultivation by identifying appropriate land for cultivation after performing traditional rituals to determine the area for cultivation. Cultivation is also based on traditional beliefs. When farms are attacked by insects and pests, traditional rituals are performed. The article outlines the agriculture system from sowing to harvest. It also studies the significance of Chang-ai festival. It also outlines the advantages and disadvantages of indigenous agriculture but concluding that modern technique must integrate with the indigenous knowledge.

Komuha Jajuo (2013) explains the “Traditional significance of paddy cultivation for Mao Naga farmers in Manipur”. To the Mao tribe, rice is the most important crop traditionally. They practice two types of terraced cultivation: Wet terrace and Dry terraced. The terraced rice field are carved out of the hill slopes by the family with the help of the village, clans and friends. The size of the terrace fields depends on the topography. Rice harvested is measured using the traditional basket “Ojie”. Terraced fields of differing sizes are owned by all the family but the number of fields and sizes may differ. Cultivation of the fields normally commences only after the village king or chief have announced for it by performing the traditional rituals. Terraced rice cultivation is economical as well as cultural. In recent times, there has been significant changes and shifts through diversification of crops and methods of cultivation.

Neli Lokho Pfoze & el.al. (2010) explored the “Indigenous traditional cultivation practices of the Mao ethnic tribe under Senapati district of Manipur”. The article emphasized that the traditional knowledge is critical in the traditional agricultural practices of the Mao tribe and it is closely linked to the socio-economic and culture of the tribe. Mao tribe practices three types of Jhum cultivation. The slashed bush are burnt with a mound of mud. Once it is burnt completely, it is spread evenly and used as nutrients to cultivate or the saplings are transplanted. In the jhum farms; only rice is cultivated, or mixed crop or non-traditional food and cash crops. It is the non-traditional crops that generates revenue from agriculture. In recent times, the tribe seem to be adapting to change by shifting to alternative farming system to make agriculture viable and sustainable.

Pr. Dimchuilu (2013) examined the “Customary land use pattern of the tribals in Manipur: A case study of the Zeliangrong community in Tamenglong district”. To the Zeliang community land is critical as it provides sustenance and security to the people. Selection of land for settlement is only after favourable rituals. Traditionally the village council “Nampou” under the “Nampei” owns the village land. There are three types

of land ownership; communal ownership, Clan ownership, and individual ownership while the land is used for settlement, agriculture, and forest. But over a period of time, land is slowly being owned by private individuals which is causing social and economic inequality. Private ownership is the outcome of market economy, government policies, developmental programs, and other policies.

A Konar & et.al. (2015) studied "...on cost and economy of cultivation of transplanted paddy and jhum paddy in Manipur." This primitive method of cultivation is still the primary source of livelihood for many tribal communities. The agricultural practices are subsistence in nature. It is observed that human labor is found to be the major contribution in the costs of cultivation. Jhum cultivation is found to be uneconomical but it is still practiced profitably because the labor is within the family or through exchange of labor.

Dangshaw Mathew maring 7 Anitha S. Pillai (2022) studied the "Jhum cultivation of the Marings of Manipur". The paper indicates that from time immemorial, the method of cultivation of the Marings have been Jhuming system known as "Pamlou". They ensure that Jhum farms are productive, practical and stable by protecting the environment. There is clear division of labor between the men and the women in the Jhum farm. Jhuming is a way of life and a cultural occupation for the Marings. It will be imperative to allow the tribe to continue practicing this method of cultivation.

Indigenous tribal practices of Nagaland

Keneikhienuo Khezhe & Samadangla Ao (2022) evaluates the "...Traditional Jhum management and crop production in Kohima, Nagaland". Their article highlights significance of Jhum cultivation in the villages in Kohima district of Nagaland. The study indicates that production of Jhum farms differs in different villages depending on the time invested on farm management throughout the cropping season. The paper also states that plant diversity to be an important factor in determining growth, development and yield formation of crops. It is suggested that introduction of innovative farm management, selection of rice variety, nutrient and weeds management and soil conservation efforts will help in higher productivity of the farms.

Moakala Jamir and Tabassum khan (2019) studied "climate change scenario and its impact on Jhum Paddy in Mokokchung district." The study finds that 80% of population in Mokokchung district is still dependent on agriculture for livelihood and the sector is highly dependent on good monsoon. The changing climatic conditions have greatly impacted the Jhum cultivation practice and its production. Jhum cultivation in Mokokchung district has been based on traditional knowledge and indigenous practices. This method of cultivation is not only important economically but culturally too. The study suggests that scientific research and intervention will be critical in helping the farmers adapt to the changing environment to ensure and safeguard livelihood and food security.

Virosanuo Solo & Khriezo Kikhi (2020) examines the "...Overview of the farming systems in Nagaland". Agriculture is the primary source of employment and income in Nagaland which had been practiced since time immemorial in the traditional ways. The changing environment has introduced new methods and systems in the farming system but the traditional practices are still an important integral part of agriculture practice in the state. Jhum system is the predominant farming system but it is adapting with strategies to meet the market demand. Besides Jhum, other system of farming in Nagaland are wet terrace farming, Alder tree-based farming, and Zabo (an integrate method of farming). Major agricultural problems identified in this paper are; lack of manpower, poor connectivity, absence of market, inadequate storage facilities, high labor costs, traditional implements.

Medonuo Rul & Rahul (2022) studied "A changing patterns of livelihood of tribes: A case study of Nagaland". An attempt is made in this paper to examine the changes in the traditional livelihood pattern on the premises that rural residents are still highly dependent on agriculture inspite of drastic changes. There is a trend of migration of labor from agriculture to non-skill sectors in the secondary and tertiary sectors. The paper studied the major tribes of Ao, Konyak and Angami in Nagaland. The study clearly indicates that there is a shift in the preference of employment towards non-agricultural activities or other non-traditional agricultural activities. The trend indicates that the people of Nagaland are shifting towards non-traditional livelihood strategies from traditional agricultural practices of shifting cultivation and wet-terraced farming.

Baharul Islam Laskar & Viboli H. Achumi (2022) made an attempt to examine the "changes in Agricultural and Cultural practices among the Sumi Nagas: A sociological study" The paper writes that agriculture is the main occupation and the major crops cultivated are rice, millet, maize, and pulses. The people also cultivates some plantation and cash crops. The major system of farming is Jhum cultivation. The land ownership among the Sumis can be categories as family land, clan land, and common village land. The reasons for change in agricultural practices are due to modernization, introduction of cash crops, and government policies. There is also shift to cash crops and marketing of farm produce and the farmers have introduced green revolution packages but there is still very high demand for local produce. The paper concludes that there is lost of culture and traditions due to the changes in traditional agricultural practices.

Thejane-I Nagi et.al (2022) in their article “Identification and documentation of indigenous technical knowledge on agricultural practices among Angami tribe, Nagaland, India.” Agriculture is the main occupation and rice is the main crop. Jhuming cultivation is the major system and the people depends on natural and bio-indicators in their cultivation cycle, the people practice mix-cropping, the soil fertility is managed with the help of the stubbles, scarecrows are used to protect the crops and grains, the farms are weeded, and post harvest, the grains are stored in a bamboo basket “tsunuo”. The seeds of crops are carefully selected from the best selected produce and stored for next season, the paddy seeds are carefully selected from the fields before harvest. There is systematic traditional water management system to ensure sufficient and timely water supply to the farms.

Conclusions

The indigenous technical knowledge needs to be preserved and protected while adopting the modern methods. In the effort to increase production and productivity for commercialization to earn, the indigenous practices must be integrated. The agriculture sector in the region is witnessing unprecedented transition but it needs to be kept in mind that it is not only an economic activity but is critical to the cultural identity of the tribes and communities. The diversification of agricultural produce and cash crops must not fully replace the traditional crops such as rice, pulses, chilly, etc. which are the staple food of the tribe because if that is not ensured, the region will become dependent on imports. Jhum cultivation and wet terrace farming are important economic activities that can be modernized to increase productivity and production. It may not hold as much social and economic importance as it use to, but the shift to other sectors for employment and livelihood does not reduce the socio-economic importance of agriculture. There are challenges due to the changing environment but every effort must be made to sustain the traditional practices of the North East region for the socio-economic survival of the numerous tribes and communities of the region.

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