International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435 (Online) Volume 15, Issue 08, August 2026)

A Study on Socio-Economic Status of Indigenous Wild Edible Fruits Growers and Its Relationship with Enterpreneurial Behaviour in Eastern West Khasi Hills District, Meghalaya.

Smti Lapynshaihunkynti Warjri[1], Prof Sanjib Kr Dutta[2]
[1]*M.A. in Rural Development, USTM*
[2]*Deptt of Rural Development, USTM*

***Abstract*-- Indigenous wild edible fruits play an important role in supporting the food security, nutrition, and livelihoods of rural and tribal communities in Meghalaya. Therefore, the present study entitled "Indigenous Wild Edible Fruit Growers and its Relationship with Entrepreneurial Behaviour in Eastern West Khasi Hills District, Meghalaya" was undertaken to assess the entrepreneurial behaviour of growers and examine the role of indigenous fruits in supporting livelihood activities. The study was conducted among 60 respondents from four villages in Eastern West Khasi Hills District. The findings revealed that most respondents were women engaged in farming and fruit collection, with Sohphie, Sohiong, and Soh-ot being the major indigenous fruits collected and sold. Weekly markets were the main marketing channel, while low selling prices and limited buyers were identified as major constraints. The study also found that indigenous wild edible fruits contribute significantly to household income and food security. However, inadequate training, lack of value-addition activities, poor market opportunities, and low selling prices restrict the entrepreneurial development of growers. The study highlighted the need for entrepreneurship development programmes, value-addition training, improved market linkages, and policy support to promote sustainable indigenous fruitbased enterprises and strengthen rural livelihoods in Meghalaya.**

***Keywords*-- Indigenous, entrepreneurial , livelihood, Sohphie, Sohiong, Soh-ot.**

I. INTRODUCTION

Indigenous wild edible fruits are fruit species that grow naturally in forests, woodlands, and other uncultivated habitats, without human cultivation. These fruits have been consumed for generations by indigenous and local communities (Mahapatra, et al 2012). They form part of the broader category of wild edible plants (WEPs) and have traditionally been used by tribal, rural, and local communities for food, medicine, and cultural purposes (Chakravarty et al., 2016).

For indigenous and rural communities, wild edible fruits are deeply connected to traditional diets, cultural practices, and longstanding livelihood systems, particularly among tribal populations who depend on them for both food and medicinal purposes (Murali et al., 2021). Wild edible fruits are also among the most important non-timber forest products and serve as valuable sources of food, nutrition and medicine, even though many species remain underutilized or little known (Pratap et al., 2023). In India, the indigenous fruits collected from the wild, play an significant role in meeting the food and cash income requirement of the rural poor and the tribal (Deshmukh et al .2010; Mahapatra et al.2012).In addition, wild edible fruits also support rural livelihoods by providing additional materials such as fuel wood, dyes, oil, and fodder (Hazarika et al 2018).

1.1 Indigenous Wild Edible Fruits in Eastern West Khasi Hills District, Meghalaya

The three specific fruits selected for the study are: Sohphie or bay berry (Myrica esculenta), Sohiong or Meghalaya cherry (Prunus nepalensis), and Soh-ot or Chestnut (Castanopsis indica).

a) Sohphie (Myrica Nagi / Myrica Esculenta)

Myrica commonly known as bayberry or as box myrtle and sohphie in khasi (Meghalaya), indigenous fruits belong to the family of Myricaceae. It naturally grows in hilly forest regions of the Indian Himalayas, including the Northeast, which is an evergreen tree grow naturally on forest ecosystem. The plant bears small globose drupes or ovoid in shape; the fruits is characterized by its green and reddish colour and consumed fresh with salt or processed into pickles, juices and wines. The bark of the tree are used 1 for make medicines purposes. (Patel & De, 2006). In addition to its nutritional value, the plant has long been used in traditional medicine for treating digestive disorders, fever, inflammation, and respiratory ailments.

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435 (Online) Volume 15, Issue 08, August 2026)

Studies have reported that the fruit and bark contain antioxidants and other bioactive compounds with potential health-promoting properties (Kumar, 2012; Singh et al., 2025).The fruits ripen from March to June, sometimes extending into July depending on local rainfall and temperature. The flowering season occurs earlier, between October and December, which leads to the fruiting phase the next year. Ripe fruits are commonly eaten fresh due to their sweet-sour flavour, while unripe fruits have a tangy, acidic taste. Because Sohphie fruits spoil within 2–3 days, local producers often convert them into pickles, jams, jellies, concentrates, and preserved fruit products, which improves shelf life and opens opportunities for value addition (Thakur, 2014). Sohphie is widely recognised as a seasonal delicacy in Meghalaya and plays a role in supporting local livelihoods. During the peak season, many rural households especially women collect and sell the fruits in village markets and along roadsides, earning supplementary income (Down To Earth, 2019). However, the trade remains mostly unorganised, and irregular supply limits its commercial expansion. Challenges such as rapid perishability, lack of storage facilities, and inconsistent harvesting practices also influence marketability (Patel et al 2006). Despite its cultural and economic value, Sohphie faces conservation concerns. Unsustainable harvesting practices such as cutting entire branches instead of picking fruits carefully and pressures on forest habitats may threaten natural regeneration of the species (Down To Earth, 2019). Promoting sustainable collection and improved post-harvest management is therefore important to protect this indigenous wild fruit resource.

b) Sohiong (Prunus Nepalensis)

Prunus nepaulensis is locally known as Sohiong in Meghalaya, often called "Meghalaya berry" or "black berry or Khasi cherry," is a wild fruit species and it belongs to the family Rosaceae. It is native to the Eastern Himalayas and is found in forested and semi-wild areas of regions such as the Khasi and Jaintia Hills of Meghalaya. (Rymbai et, al (2016) and Pradhan, D. et al (2022)). It an important indigenous and underutilized fruit of Meghalaya, particularly to the Khasi and Hills. It grows wild and semi-cultivated in subtropical and temperate Himalayan regions at elevations of 800–3,000 m above sea level. The species is native to the Eastern Himalayas and is also found in Bhutan, Nepal, 2 Myanmar, and China. Due to its unique taste and adaptability to cool climates, Sohiong has good potential for commercial cultivation (Rymbai et al., (2016) and Rymbai et al (2023). Sohiong (Prunus nepalensis) is a medium to large evergreen tree attaining a height of 15–20 m, with grey bark and open, upright branches.

The leaves are oblong to lanceolate, caudate-acuminate, serrate, and glabrous, averaging 11.2 cm in length and 4.7 cm in breadth. The flowers are white and borne singly or in clusters of two to three in terminal or axillary racemes. The fruit is a fleshy drupe, round and cherry-like in appearance, green to pinkish when immature and dark purple to blackish-purple when fully ripe, with a smooth surface. The stone is hard, round, and generally smooth, although it may be rough in some genotypes (Rai et al., 2005; Dkhar et al.(2019). Sohiong fruits have been traditionally consumed by the tribal communities of the Khasi and Jaintia Hills since time immemorial. The fruits are valued for their unique colour, taste, and flavour and are commonly eaten fresh when ripe or processed into value-added products such as jam, juice, pickle, and wine (Patel et al., 2008; Dkhar & Rao, 2019). The fruit is highly valued by tribal communities for its unique taste, nutritional properties, and traditional uses (Rymbai et al., 2016). Rich in vitamins, minerals, anthocyanins, and other bioactive compounds, Sohiong is considered an important underutilized fruit with significant nutritional potential (Rymbai et al., 2016; Basumatary et al., 2023). Besides being consumed fresh, the fruit is processed into juices, squashes, jams, candies, and wine, contributing to household income and local livelihoods (Rymbai et al., 2023). Owing to its nutritional, economic, and cultural importance, Sohiong has attracted increasing attention for its conservation, commercialization, and sustainable utilization in Meghalaya (Laloo et al., 2026).

c) Soh-ot (Castanopsis Indica)

Castanopsis Indica common known as soh-ot in khasi (Meghalaya), Hinguri (Assamese), Chakkum-khokrok (Garo), Khasi badam (Hindi), and Akhar (Nepali). It is an indigenous wild edible nut-bearing tree belonging to the family Fagaceae (Seal, T. (2011)).They are indigenous to temperate regions of the Northern Hemisphere. Chestnuts are grown throughout the Himalayas up to Assam and Meghalaya at altitudes of 2,000 to 3,000 m. The trees have naturalized in India and are doing well throughout the foothills of the Himalayas, but are concentrated in the Jammu and Kashmir, Kullu, Kangra, Shimla valleys and in the north-western parts of Uttar Pradesh (Shilpa et al, (2023)). Chesnut are 3 nutritious values contain small amout of fat and naturally free or absence cholesterol or gluten, while being rich in carbohydrates, proteins, fibre, vitamins, and minerals (Devi& Behera (2022); Shilpa et al, (2023)).Chestnut (Castanea spp.) trees are ecological significance and economical value and source of edible nuts (Larue et al. (2021)).

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435 (Online) Volume 15, Issue 08, August 2026)

The species is valued for its edible nuts, which are widely consumed by local communities in Meghalaya. Soh-ot are fruiting / availability season are in the month of NovemberDecember, flowers and fruits occur February–December; nuts are generally available during autumn–winter (Devi et al, (2022). Furthermore, the nuts are commercially traded in several local markets, including Jowai, Nongstoin, Mairang, and Tura, highlighting their economic importance to the indigenous population of the region (Seal, T. (2011)).

1.2 Traditional use and availability of indigenous fruits

Indigenous communities in the Khasi Hills have traditionally utilized wild edible fruits as food, medicine, and sources of seasonal income (Jeeva, 2009; Kayang, 2005). These fruits are consumed fresh, processed into products such as jams, squashes, and fermented beverages, and are also used in traditional healthcare practices (Kayang et al., 2005). Their availability is largely seasonal and depends on habitats such as sacred groves, secondary forests, and fallow lands (Jeeva, 2009). Studies and market surveys indicate that many of these fruits are sold in local markets during their fruiting season, contributing to household livelihoods and income generation (Jeeva, 2009; Lyngdoh et al., 2025).

1.3 Statement for the Problem

Indigenous fruits play an important role in supporting the food security, nutrition, and livelihoods of rural and tribal communities in Meghalaya. Several indigenous fruit species possess considerable economic potential and are widely used for household consumption, value-added products, and local market sales. Despite their importance, the full potential of indigenous fruits for income generation and enterprise development remains largely underutilized. The successful commercialization and sustainable utilization of indigenous fruits depend not only on the availability of resources but also on the entrepreneurial behaviour of growers. Characteristics such as innovativeness, risk-taking ability, decision-making skills, leadership qualities, and market orientation influence the capacity of growers to adopt improved production practices, undertake value addition, and access markets effectively. However, there is limited information regarding the entrepreneurial behaviour of indigenous fruit growers in Meghalaya, particularly in the Eastern West Khasi Hills District. The lack of such information makes it difficult to design appropriate training programmes, extension interventions, and policies aimed at promoting indigenous fruitbased entrepreneurship and improving rural livelihoods.

Therefore, the present study was undertaken to assess the entrepreneurial behaviour of indigenous fruit growers and identify the factors influencing their entrepreneurial development in the study area.

1.4 Scope of the Study

The study is confined to indigenous wild edible fruit growers of Eastern West Khasi Hills District, Meghalaya. It focuses on selected indigenous fruit species grown or managed by farmers and examines their entrepreneurial behaviour, socio-economic characteristics, and related factors. The study covers the period during which data are collected and does not include growers from other districts of Meghalaya.

1.5 Need for the study:

Indigenous wild edible fruits are an important part of the culture, diet,and livelihood of the people in the Eastern West Khasi Hills. Many families especially women depend on 5 these fruits for food and for earning extra income during the fruiting seasons (Makdoh .et al (2024)).However, even though these fruits are valuable, very few people grow them in a systematic way or use them to develop small businesses. Most fruits are still collected from forests and sold in unorganised local markets. This means their full economic potential is not being used. Studies show that these fruits are rich in nutrients and have many health benefits. They can also be processed into value-added products such as juice, jam, pickles, wine, roasted nuts, and natural dye / pigment or organic colour. These products can help people earn more income, but local growers often lack knowledge, skills, and support to develop such enterprises.
Therefore, this study is needed to:

1. Document important wild fruits like Sohphie, Sohiong, and Soh-ot;
2. Understand the entrepreneurial behaviour of the people who collect or grow them;
3. Explore how these fruits can support income generation, value addition, and smallscale businesses and
4. Provide information that can help the government and local communities promote sustainable use and conservation of these resources.

1.6 Objectives

The research were conducted with the aim to study important marketable indigenous fruits of Meghalaya and investigate their role in addressing livelihood and food needs of the people. The present study also attempts to evaluate their usage so that they can be popularized and exploited for value addition.

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435 (Online) Volume 15, Issue 08, August 2026)

1. To study the status of involvement of indigenous fruit collector at their socio-economic condition.
2. To study the entrepreneurial behaviour of local fruit growers.
3. To examine the relationship between availability of wild edible fruits and entrepreneurial practices.

1.7. Research Questions

1. What types of forest fruits are grown in the study area, and what is their seasonal availability?
2. What is the entrepreneurial behaviours of the local fruit growers?
3. How does the availability of wild edible fruits influence entrepreneurial activities in the district?

II. Review Of Literature

Jeeva, S. (2009) documented 151 species of wild edible fruits used by the Khasi tribes of Meghalaya and reported their horticultural and economic importance. The study found that these fruits contribute to the socio-economic development of tribal communities and emphasized the need for their conservation due to increasing biodiversity loss caused by human activities.

eeva, S. (2009) documented 151 species of wild edible fruits used by the Khasi tribes of Meghalaya and reported their horticultural and economic importance. The study found that these fruits contribute to the socio-economic development of tribal communities and emphasized the need for their conservation due to increasing biodiversity loss caused by human activities.

Kala (2011) examined the role of sacred groves in conserving biodiversity and traditional ecological knowledge in the Pachmarhi Biosphere Reserve, India. The study found that sacred groves preserved a rich diversity of ethnobotanically important plant species, including wild edible fruits, medicinal plants, fodder, fuelwood, and timber species. The author emphasized that traditional conservation practices of local tribal communities contribute significantly to biodiversity conservation and the sustainable use of natural resources

Panthari et al. (2012) reviewed the biological, medicinal, and therapeutic properties of Myrica nagi, an important indigenous fruit tree of the Himalayan region. The study reported that the fruit is rich in antioxidants and other bioactive compounds with significant medicinal value. Various parts of the plant, including fruits, leaves, roots, and bark, are traditionally used for treating different ailments. The authors highlighted the nutritional, medicinal, and commercial importance of Myrica nagi, emphasizing its potential as a valuable indigenous fruit resource.

Gangte et al. (2013) documented 84 wild edible plant species used by the Zou tribe of Manipur and highlighted their importance in supporting the food and livelihood needs of the community. The study revealed that traditional knowledge of wild edible plants remains an important component of subsistence living among tribal populations. The authors emphasized the need for further research on the nutritional value of these plants to enhance food and nutritional security.

Pala et al (2014) conducted a study to document the utilization and marketing of important indigenous fruits in Meghalaya and to evaluate their contribution to the livelihood and food security of local communities. Information was collected through market surveys and informal interviews over a period of one year. The study identified ten indigenous fruits that were widely marketed in Iewduh, one of the largest traditional markets in Meghalaya. The findings revealed that women played a dominant role in the marketing and sale of indigenous fruits, thereby generating additional household income. The study further reported that five of the fruit species were collected from the wild, three were semi-domesticated, and two were domesticated. Value addition practices were observed for five fruit species, which helped reduce post-harvest losses and increase economic returns. The authors emphasized the importance of indigenous fruits in supporting rural livelihoods and recommended conservation and value-addition strategies to enhance income-generating opportunities for local communities.

Hazarika et al (2015) reported that Northeast India is one of the world's major biodiversity hotspots and possesses rich genetic diversity of both commercial and underutilized fruit crops. These indigenous fruits are commonly found in forests and homestead gardens, where they contribute to the food and nutritional security of rural communities. The authors highlighted that many of these fruits are rich in vitamins, minerals, and medicinal properties but remain underexploited due to limited awareness, poor market demand, and lack of value-addition practices. The study also emphasized that climate change, urbanization, and developmental activities threaten the conservation of these valuable fruit resources, making their documentation, utilization, and conservation essential for sustainable development.

Biswas et al. (2018) the study documented 15 wild edible fruit species consumed by indigenous communities in different districts of Tripura. The findings revealed that these fruits serve as important seasonal food resources and contribute significantly to the nutritional, medicinal, and socio-economic well-being of tribal populations.

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435 (Online) Volume 15, Issue 08, August 2026)

The authors emphasized the need for documentation, preservation, and promotion of wild edible fruits because of their importance for food security and their risk of extinction.

Laloo et al. (2026) reviewed the diversity, nutritional composition, and bioeconomic importance of selected minor fruits of Meghalaya, including Prunus nepalensis, Myrica esculenta, Myrica nagi, Elaeagnus latifolia, and Docynia indica. The study highlighted that these fruits are rich in bioactive compounds and possess significant nutritional and health benefits. The authors emphasized that value addition, product development, and commercialization of these indigenous fruits can enhance their market potential and contribute to livelihood improvement and economic development of rural communities in Meghalaya.

III. Data Collection

The study included all individuals and households involved in the collection, cultivation, processing, and marketing of indigenous wild edible fruits in the Eastern West Khasi Hills District.

The units of the study were fruit collectors, fruit growers, small-scale processors, and local sellers/entrepreneurs who handled Sohphie, Sohiong, and Soh-ot. 3.4 Sampling technique A purposive sampling was used to select Eastern West Khasi hills because of their high presence of indigenous fruit activities. Villages were selected randomly respondents involved in wild fruit-related activities will be chosen using random sampling to avoid bias.

IV. Analysis And Interpretion

The analysis and interpretation of primary data collected from respondents involved in the collection, cultivation, processing, and marketing of indigenous wild edible fruits in the Eastern West Khasi Hills District of Meghalaya. The data were analysed to understand the respondents, socio-economic profile, their involvement in fruit-related activities, income generation, marketing practices, and the challenges they face. The findings highlight the importance of indigenous wild edible fruits in supporting livelihoods and promoting sustainable rural development in the study area.

TABLE 1 : Socio-Economic Profile of Indigenous Fruits Growers

Demographic factor)	**No. of respondents (N=60)**	**Percentage**
Age of the respondents (Year)		
Below 25	3	5.0
26-35	20	33.3
36-45	29	48.3
46-55	6	10.0
Above 55	2	3.3
Gender	5	8.3
Male	55	91.7
Female		
Marital status		
Unmarried	9	15.0
Married	51	85.0
Education qualification		
Illiteracy	3	5.0
Primary	34	56.7
Secondary	11	18.3
Higher secondary	7	11.7

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435 (Online) Volume 15, Issue 08, August 2026)

Graduate and above	5	8.3
Primary occupation		
Farming	49	81.7
Wage Labour	9	15.0
Small business	2	3.3
House hold members		
Below 3 member	2	3.30
4-6 members	33	55.0
7-9 members	25	41.7
Respondent's Monthly Income (in Rs.)		
5001-6000	28	48.0
6001-7000	15	25.0
7001-8000	13	21.7
8001-9000	3	5.00
9001-10000	1	1.70

Table 1 presents the socio-economic profile of the indigenous fruit growers selected for the study. The results reveal that the majority of the respondents belonged to the 36 45 years age group (48.3%), followed by 26–35 years (33.3%). Only (5.0) percent of the respondents were below 25 years, while 10.0 percent and 3.3 percent belonged to the age groups of 46–55 years and above 55 years, respectively. This indicates that middle-aged individuals were more actively involved in indigenous fruit cultivation. With regard to gender, the majority of the respondents were female (91.7%), while only 8.3 percent were male, indicating a significant participation of women in indigenous fruit-related activities. In terms of marital status, 85.0 percent of the respondents were married, whereas 15.0 percent were unmarried. Regarding educational qualification, the highest proportion of respondents had completed primary education (56.7%), followed by secondary education (18.3%), higher secondary education (11.7%), and graduate and above (8.3%) Only 5.0 percent of the respondents were illiterate. Concerning primary occupation, the majority of the respondents were engaged in farming (81.7%), followed by), while only 3.3 percent were involved in small business activities. With respect to household size, more than half of the respondents (55.0%) belonged to households consisting of 4–6 members, followed by 41.6 percent with 7–9 members, while only 3.3 percent had fewer than 3 household members. In terms of monthly income, the largest proportion of respondents (26.7%) earned between Rs. 5001–6000, followed by 25.0 percent earning Rs. 6001–7000 and 21.7 percent earning Rs. 7001–8000. A smaller proportion earned between Rs. 8001–9000 (5.0%) and Rs. 9001–10000 (1.7%).

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435 (Online) Volume 15, Issue 08, August 2026)

TABLE 2 :Entrepreneurial Behaviour of Indigenous Fruit Grower.

Entrepreneurial behaviour Indicators	No. of Respondents(N=60)	Percentage
Selling Fruits in Market	60	100.0
Mode of selling of fruits		
Raw	60	100.0
Place of selling		
Local village market	14	23.3
Weekly market (Haat)	46	76.7
Satisfied with current selling price		
No	60	100.0
Difficulty in collecting fruits		
Yes	45	75.0
No	15	25.0
Risk-taking ability		
Yes	49	81.7
No	11	18.3
Training attended		
No	60	100.0
Access to credit		
Yes	60.0	100.00
Interest in expanding business		
Yes	49	81.7
No	11	18.3

Table 2 presents the entrepreneurial behaviour of indigenous fruit growers in the study area. The findings reveal that all 60 respondents (100%) were involved in selling fruits in the market, indicating that fruit cultivation and marketing constitute an important livelihood activity. With regard to the mode of selling, all respondents (100%) sold their fruits in raw form, and none reported engaging in value addition or processing before sale. Regarding the place of selling, the majority of respondents 46 (76.7%) sold their produce in the weekly market (haat), while 14 respondents (23.3%) sold their fruits in the local village market. This suggests that weekly markets serve as the primary marketing channel for indigenous fruits.

The table further shows that all respondents (100%) were not satisfied with the current selling price of their fruits, indicating dissatisfaction with the returns obtained from fruit marketing. Concerning marketing problems, all respondents (100%) reported low price as a major constraint, while 54 respondents (90.0%) faced the problem of limited buyers. These findings highlight the marketing challenges encountered by indigenous fruit growers. With respect to difficulty in collecting fruits, 45 respondents (75.0%) reported facing difficulties during collection, whereas 15 respondents (25.0%) did not experience such difficulties. Regarding risk taking ability, a majority of respondents 49 (81.7%) exhibited willingness to take risks, while 11 respondents (18.3%) were not willing to do so.

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435 (Online) Volume 15, Issue 08, August 2026)

The table also indicates that none of the respondents (100%) had attended any training programmes related to fruit cultivation, processing, or marketing, suggesting a lack of exposure to formal capacity building initiatives.

In terms of access to credit, all respondents (100%) reported having access to credit facilities. Finally, the majority of respondents 49 (81.7%) expressed an interest in expanding their business, while 11 respondents (18.3%) were not interested in expansion.

TABLE 3: Status of Indigenous Wild Edible Fruits Collection and Marketing

Variables	No. of respondents (N=60)	Percentage
Fruits grow seasonally in the locality	60	100.0
Growers involved in Fruit collection/selling		
Sohphie	41	24.6
Soh-iong	9	11.4
Soh-ot	10	13.3
Source of fruits collection		
Forest	34	56.7
Home garden	22	36.7
Both forest and home garden	4	6.7
Purpose of collection		
Household consumption	60	100.0
Selling	60	100.0
Years of experience		
Less than 5 years	6	10,0
5-10 years	46	76.7
11-15 years	8	13,3

The Table 3 presents the status of indigenous wild edible fruits collection and marketing among the respondents in the study area. The findings show that all respondents 60 (100%) reported that indigenous wild edible fruits grow seasonally in their locality, indicating the widespread availability of these fruits during specific seasons. Regarding involvement in fruit collection and selling, 41 respondents were 24 engaged in the collection and marketing of Sohphie, followed by 19 respondents involved in Soh-iong, and 8 respondents involved in Sohot. This indicates that Sohphie is the most commonly collected and marketed indigenous fruit among the respondents.

With respect to the source of fruit collection, the majority of respondents 34 (56.7%) collected fruits from the forest, while 22 respondents (36.7%) collected fruits from their home gardens. A small proportion 4 (6.7%) collected fruits from both forest and home garden sources. This suggests that forests remain the primary source of indigenous wild edible fruits. Concerning the purpose of collection, all respondents 60 (100%) reported collecting fruits for household consumption as well as for selling, highlighting the dual role of these fruits in supporting both food security and household income.

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435 (Online) Volume 15, Issue 08, August 2026)

In terms of experience in fruit collection and marketing, the majority of respondents 46 (76.7%) had 5–10 years of experience, followed by 8 respondents (13.3%) with 11–15 years of experience, while 6 respondents (10.0%) had less than 5 years of experience.

This indicates that most respondents possess considerable experience in the collection and marketing of indigenous wild edible fruits.

TABLE 4. Distribution of Respondents by Quantity of Wild Edible Fruits Collected in One Season (kg) (N=60)

Quantity of Wild Edible Fruits collected in one season (kg)	Sohphie	Sohiong	Soh-ot
11-20	23(56.10)	12(63.16)	3(37.5)
21-30	12(29.27)	5(26.32)	3(37.5)
31-40	5(12.20)	2(10.53)	-
41 & above	1(2.44)	-	2 (25.0)

Table 4 presents the distribution of respondents according to the quantity of wild edible fruits collected in one season. A total of 60 respondents participated in the study, of which 41 collected Sohphie, 19 collected Sohiong, and 8 collected Soh-ot. In the case of Sohphie, the majority of respondents, 23 (56.10%), collected 11–20 kg per season. This was followed by 12 (29.27%) respondents who collected 21–30 kg, while 5 (12.20%) respondents collected 31–40 kg. Only 1 (2.44%) respondent collected 41 kg and above in a season.Similarly, for Sohiong, most respondents, 12 (63.16%), collected 11–20 kg per season. About 5 (26.32%) respondents collected 21–30 kg, while 2 (10.53%) 25 respondents collected 31–40 kg. None of the respondents collected 41 kg and above. Regarding Soh-ot, an equal proportion of respondents, 3 (37.50%) each, collected 11–20 kg and 21–30 kg per season. Furthermore, 2 (25.00%) respondents collected 41 kg and above, while no respondents were recorded in the 31–40 kg category.

Table -5 presents the selling price of different wild edible fruits, namely Sohphie, Sohiong, and Soh-ot, as reported by the respondents. In the case of Sohphie, the majority of respondents (29 out of 41) sold the fruit at a price range of Rs. 30–40 per kg. Another 10 respondents sold it at Rs. 41–50 per kg, while only 2 respondents sold it at Rs. 51–60 per kg. None of the respondents reported selling Sohphie above Rs. 60 per kg. This indicates that Sohphie is generally sold at a relatively lower price compared to the other fruits. For Sohiong, no respondents sold the fruit below Rs. 50 per kg. Most respondents (8 out of 19) sold it at Rs. 61–70 per kg, followed by 7 respondents who sold it at Rs. 71–80 per kg. Only 4 respondents sold Sohiong at Rs. 51–60 per kg. The findings suggest that Sohiong commands a higher market price than Sohphie. Regarding Soh-ot, respondents reported a wider variation in selling prices. Four respondents sold the fruit at Rs. 51–60 per kg, two respondents sold it at while one respondent each sold it at Rs. 30–40 per kg and Rs. 61–70 per kg. No respondents reported selling Soh-ot at Rs. 71–80 per kg.

TABLE 5: Selling Price of Wild Edible Fruits

Price of the fruits (in Rs./Kg	Sohphie	Sohiong	Sohot
30-40	**29**	**-**	**1**
41-50	**10**	**-**	**2**
51-60	**2**	**4**	**4**
61-70	**-**	**8**	**1**
71-80	**-**	**7**	**-**
Total	**41**	**19**	**8**

V. Conclusion

The study revealed that indigenous wild edible fruits play an important role in the livelihood of rural households in the Eastern West Khasi Hills District of Meghalaya. Most respondents were middle-aged women (91.7%), married, and primarily engaged in farming. Indigenous fruit collection and marketing serve as an additional source of income and contribute to household food security. The findings show that all respondents were involved in selling fruits, but all sold them in raw form without any value addition. Weekly markets (haats) were the main marketing channel. However, respondents faced several constraints, particularly low selling prices and limited buyers. Despite these challenges, most respondents demonstrated a willingness to take risks and expressed interest in expanding their fruit-related businesses. The study further revealed that forests remain the primary source of indigenous wild edible fruits, although some fruits are collected from home gardens. Sohphie was found to be the most commonly collected and marketed fruit. Most respondents had 5–10 years of experience in fruit collection and marketing, indicating substantial knowledge and involvement in the activity. The quantity collected per season was generally moderate, with most respondents collecting between 11–20 kg of fruits. Among the fruits studied, Sohiong obtained the highest market price, while Sohphie was sold at comparatively lower prices. The absence of training programmes and value-addition activities highlights the need for capacity building and market development interventions.

VI. Key Finding

1. The majority of respondents (48.3%) belonged to the 36–45 years age group.
2. Women constituted 91.7% of the respondents, indicating their dominant role in indigenous fruit-related activities.
3. Most respondents (81.7%) depended on farming as their primary occupation.
4. All respondents were engaged in fruit marketing and sold fruits in raw form.
5. Weekly markets (76.7%) were the main outlet for selling indigenous fruits.
6. All respondents were dissatisfied with the current selling price of fruits.
7. Low price (100%) and limited buyers (90%) were the major marketing constraints.
8. None of the respondents had attended any training related to fruit cultivation, processing, or marketing.
9. Forests were the main source of fruit collection (56.7%).
10. Sohphie was the most commonly collected and marketed indigenous fruit.
11. Most respondents (76.7%) had 5–10 years of experience in fruit collection and marketing.
12. Sohiong fetched a higher selling price compared to Sohphie and Soh-ot.
13. A large majority (81.7%) expressed interest in expanding their fruit-based business activities.

VII. Discussion

The study shows that indigenous wild edible fruits play an important role in supporting household income and food security in the Eastern West Khasi Hills District. Women were the main participants in fruit collection and marketing, highlighting their significant contribution to livelihood activities. Although all respondents sold fruits in the market, no value-addition or processing activities were undertaken. Low selling prices, limited buyers, and lack of training were identified as major constraints. Most fruits were collected from forests, indicating the importance of forest resources for rural livelihoods. Despite these challenges, the majority of respondents showed interest in expanding their fruit-related businesses. Therefore, training programmes, value-addition initiatives, and improved market access are needed to enhance income and promote sustainable development.

BIBLIOGRAPHY

[1] Acharya, K. P., & Acharya, R. (2010). Eating from the wild: indigenous knowledge on wild edible plants in Parroha VDC of Rupandehi district, Central Nepal. *International Journal of Social Forestry,* PP 3(1), 28-48.

[2] Akinnifesi, F. K., Ajayi, O. C., Sileshi, G. W., Kadzere, I., & Akinifesi, A. I. (2008). Domesticating and commercialising indigenous fruit and nut tree crops for food security and income generation in Sub-Saharan Africa

[3] Biswas, S. C., Majumdar, M., Das, S., & Misra, T. K. (2018). Diversity of wild edible minor fruits used by the ethnic communities of Tripura, India. *Indian Journal of Traditional Knowledge*, Vol 17(2), PP. 282-289

[4] Chakravarty, S., Bhutia, K. D., Suresh, C. P., Shukla, G., & Pala, N. A. (2016). A review on diversity, conservation and nutrition of wild edible fruits. *Journal of Applied and Natural Science*, Vol 8(4), PP 2346–2353.

[5] Chanu, T. B., Singh, C., & Khan, S. (2024). Kaphal (Myrica esculenta) – a promising wild fruit tree of the Indian Himalayas. *Indian Farmer*, Vol 11(8), PP 306–310.

[6] Deshmukh, B. S., & Waghmode, A. (2011). Role of wild edible fruits as a food resource: Traditional knowledge. *International Journal of Pharmacy & Life Sciences*, Vol 2(7).

[7] Devi, M. P., & Behera, H. K. U. (2022) Characterization of Wild Fagaceous Nut Species for Morphometric Traits from Sub-tropical Forest Area of Kyrdemkulai, Meghalaya.

[8] Directorate of Census Operations, Meghalaya. https://censusindia.gov.in Directorate of Economics and Statistics, Meghalaya. (2023).

[9] Statistical handbook of Meghalaya Census of India. (2011). *District Census Handbook: West Khasi Hills* (Part XII-B). 2023. Government of Meghalaya.

[10] Dkhar, M., & Rao, P. S. S. (2019). Marketing Indigenous Fruits of Meghalaya: Challenges and Opportunities. *Journal of North East India Studies*, Vol 9(2). 31

[11] Down To Earth. (2019, July 12). Meet Sohphie: *The wild delight of Meghalaya.* https://www.downtoearth.org.in Eastern West Khasi Hills District Portal. (n.d). About District profile. Meghalaya of Meghalaya. https://.gov.in.

[12] Gangte, H. E., Thoudam, N. S., & Zomi, G. T. (2013). Wild edible plants used by the Zou tribe in Manipur, India. *International Journal of Scientific and Research Publications*, Vol 3(5), PP1-8. Government of Meghalaya. (2021). Eastern West Khasi Hills district. Meghalaya Government Portal. https://meghalaya.gov.in Government of Meghalaya. (n.d.).

[13] About Meghalaya. Meghalaya Information & Public Relations Department. https://www.megipr.gov.in/about-meghalaya.html

[14] Hazarika, T. K., & Marak, S. (2015, August). Wild edible fruits of Meghalaya, North East India: an unexplored potential for nutritional security and economic prosperity. In III International Symposium on Underutilized Plant Species 1241 PP 717-727

[15] Hazarika, T. K., & Pongener, M. (2018). Potential wild edible fruits of Nagaland, North east India and its significance in the livelihood and nutritional security of rural, indigenous people. *Genetic resources and crop evolution*, Vol 65(1), PP199-215.

[16] India-WRIS. (n.d.). Meghalaya. India Water Resources Information System (WRIS). https://indiawris.gov.in/wiki/doku.php id Meghalaya Indira Gandhi National Centre for the Arts. (n.d.). Introduction – Meghalaya. Janapada Sampada,

[17] Jeeva, S. (2009). Horticultural potential of wild edible fruits used by the Khasi tribes of Meghalaya. *Journal of Horticulture and Forestry*, Vol 1(9), PP 182–192.

[18] Kala, C. P. (2011). Traditional ecological knowledge, sacred groves and conservation of biodiversity in the Pachmarhi Biosphere Reserve of India. *Journal of Environmental Protection*, Vol 2(7), P 967.

[19] Kalaba, F. K., Chirwa, P. W., & Prozesky, H. (2009). The contribution of indigenous fruit trees in sustaining rural livelihoods and conservation of natural resources. *Journal of Horticulture and Forestry,* Vol 1(1), PP1-6. Kayang,

[20] H. (2007). Tribal knowledge on wild edible plants of Meghalaya, Northeast India. *Indian Journal of traditional knowledge,* Vol 6(1), PP177-181.

[21] Khruomo, N., & Deb, C. R. (2018). Indigenous wild edible fruits: Sustainable resources for food, medicine and income generation, a study from Nagaland, *India. J Exp Biol Agric Sci*, Vol 6(2), PP 405-413.

[22] Laloo, E. R., Das, M. K., Kalita, P., & Duarah, R. (2026). Minor Fruits of Meghalaya: A Comprehensive Review on Diversity, Livelihood, and Bioeconomic Perspectives. *Current Traditional Medicine,* Vol 12(1),

[23] Larue, C., Barreneche, T., & Petit, R. J. (2021). Efficient monitoring of phenology in chestnuts. Scientia Horticulturae, 281, 109958.

[24] Lyngdoh, D., Kharshandi, D., Lyngdoh, A., & Marweiñ, M. V. (2025). Wild edible plants and mushrooms used by the Khasi tribe of East Khasi Hills District, Meghalaya, India. *Medico-Biowealth of India,* Vol 19, 73.

[25] Mahapatra, A. K., & Panda, P. C. (2012). Wild edible fruit diversity and its significance in the livelihood of indigenous tribals: Evidence from eastern India. Food Security, Vol 4(2), PP 219- 234.

[26] Makdoh, K., Lynser, M. B., & Pala, K. H. M. (2014). Marketing of indigenous fruits: A source of income among Khasi women of Meghalaya, North East India. *Journal of Agricultural Sciences*, V 5(1–2), 1–9. https://doi.org/10.1080/09766898.2014.11884707 Meghalaya House Delhi. (n.d.).