

Underutilized Edible Resources of Jipapad, Eastern Samar: A Social Media Perspective

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Abstract. This study aimed to document under-utilized edible indigenous and wild food resources in Jipapad, Eastern Samar, Philippines and highlight their potential for local food security and biodiversity conservation. Data were gathered by reviewing Facebook posts from residents or visitors to the municipality from 2022 and earlier. Identification of food items was conducted through user comments, Google Image Search, and related online articles and publications. Findings revealed a variety of locally available resources, including edible shoots and stems, fruits, root crops, leafy vegetables, seeds and grains, flowers, and mushrooms, with more than 25 species identified across these categories. These results show that social media can be a valuable tool in documenting and promoting awareness of lesser-known food resources. The study underscores the importance of further research, preservation, and utilization of these foods to support community nutrition, cultural heritage, and sustainable livelihoods.

Keywords: Eastern Samar; Edible plants; Indigenous food; Facebook; Under-utilized species; Wild resources.

1.0 Introduction

The COVID-19 pandemic disrupted daily life and global systems in unprecedented ways, affecting health, economies, and food security. In the Philippines, community quarantines and travel restrictions limited the movement of goods, including food, and revealed the vulnerability of relying on imported supplies. At the same time, the agriculture sector remained essential, with farmers continuing to produce food despite the challenges. The Department of Agriculture responded with initiatives such as the “Plant, Plant, Plant” program (Aparta, 2021; Cruz, 2022) to encourage food production both in rural and urban areas. However, the pandemic was soon followed by the Russia-Ukraine conflict, which triggered oil price hikes and increased the costs of transporting and producing basic commodities, further threatening food security, especially in low-income communities (Arndt, et al., 2022; Mishra et al., 2024).

The need for self-sufficiency in food became more apparent during these crises. Past research shows that urban horticulture can contribute to food security and nutrition, with potential yields that can significantly supplement diets (Eigenbrod & Gruda, 2015). Similar studies highlight that food security is not only about having enough food but ensuring that it is nutritious (Woertz, 2020). However, government food aid during quarantines often consisted of rice, canned goods, and instant noodles – items that may satisfy hunger but provide limited nutrition. Locally available and indigenous food resources can address this gap, as they are nutritious and, in some cases, underutilized or harvested only from the wild (Peduruhewa, 2021).

Social media, particularly Facebook, has emerged as an important platform for sharing agricultural knowledge and promoting local products. Studies show that agriculture students and farmers widely use it to exchange information, encourage agribusiness, and connect with broader audiences (Watts, 2018; Jaya et al., 2021; Riley & Robertson, 2021; Kabir et al., 2023). Despite this, there is limited research on how social media content can be used to identify and document underutilized edible resources, especially in rural provinces like Eastern Samar.

This study aims to examine Facebook posts for information on locally available edible resources in Jipapad, Eastern Samar, focusing on underutilized foods that are not yet commercially produced but have potential nutritional value. It also seeks to describe the characteristics of these resources based on post comments and available literature. By documenting these resources, the study can provide a basis for further research, promote sustainable local food production, and support food and nutrition security in times of crisis. This is particularly vital for Jipapad, a landlocked municipality in the province of Eastern Samar in the Philippines, that faces challenges related to poverty and food insecurity due to high susceptibility to flooding (Ciasico et al., 2023) and limited livelihood options.

2.0 Methodology

2.1 Research Design

This study employed a descriptive research design to systematically document and analyze Facebook posts about edible resources that are either gathered from the wild or not commercially cultivated in the municipality of Jipapad. The design was chosen because it enables the detailed description of phenomena without manipulating variables, allowing the researcher to answer “what,” “when,” “where,” and “how” questions. Following established descriptive research procedures (Siedlecki, 2020), the method relied on naturally occurring user-generated content to present an authentic representation of local knowledge and practices related to underutilized edible resources. Both visual and textual content from posts were preserved and examined to capture the context and cultural value of the resources depicted.

2.2 Research Participants

The participants in this study were Facebook users who either resided in Jipapad or had visited the municipality and posted images or information about locally available edible resources. To be included, posts had to feature plant-based food sources originating from Jipapad, and participants had to provide explicit consent for the use of their materials. Posts without clear evidence of local origin or without granted permission were excluded. These Facebook users served as key informants, as their posts and interactions offered direct evidence of the availability, use, and cultural relevance of edible resources in the community.

2.3 Research Instruments

The main research instrument was a structured content review template developed by the researcher, adapted from established content analysis methods (Krippendorff, 2018). This template included fields for the type of edible resource depicted, the plant part featured (such as shoots, roots, seeds, or fruits), accompanying captions, the date of posting, the number and type of Facebook reactions, and the number and content of relevant comments. Screenshots of the posts were taken and securely stored for further analysis. To assist in plant identification and classification, supplementary online searches were conducted through Google and cross-checked with botanical databases. This process ensured both the accuracy of plant identification and consistency in coding.

2.4 Data Gathering Procedure

Data collection followed a reverse chronological order, starting from 2022 and moving to earlier posts. The researcher first accessed the participants' Facebook profiles and examined the “Photos” section to identify images that showed edible plant-based resources from Jipapad. Each selected post was reviewed for captions and comments to confirm the edibility and local origin of the resource. Using the coding template, each plant was classified by the part depicted, and details such as posting date, engagement metrics, and comment content were documented. Screenshots were taken for all relevant posts, and additional verification of plant species was conducted using online resources. All of these steps were undertaken only after the Facebook users provided informed consent to use their content for research purposes.

2.5 Data Analysis

The collected data were analyzed using both quantitative and qualitative approaches. Quantitative analysis involved the use of descriptive statistics, including frequency counts and percentages, to summarize the types of edible resources documented, the plant parts most frequently represented, and the level of online engagement with each post. Qualitative analysis employed thematic analysis to examine captions and comments, allowing the researcher to identify recurring themes related to local knowledge, preparation methods, and cultural significance of the edible resources. To ensure reliability, data classification was reviewed multiple times by the researcher, with random cross-checks conducted by a second reviewer.

2.6 Ethical Considerations

The study adhered to ethical standards for social media research. Informed consent was obtained from all Facebook users whose posts were included in the study, and only posts with explicit permission were analyzed. Identifying details unrelated to the research objectives were removed to protect participant privacy. Screenshots and other collected materials were stored securely and used solely for research purposes. Throughout the process, the researcher ensured that privacy, intellectual property rights, and cultural sensitivities were respected, maintaining the dignity and rights of all participants.

3.0 Results and Discussion

3.1 Edible Stem or Shoot

Ubod is a general term used in Jipapad to refer to the soft inner tissues of the stem or core of young shoots of the palm, bamboo, or banana that is cooked as a vegetable. Two posts were found on Ubod from Anahaw and on Dabong from bamboo. The Ubod from Anahaw and Dabong posts (Table 1) garnered a total of 195 and 232 reactions, respectively, indicating that many viewed and responded to them.

Table 1. *The edible shoot and stem from Jipapad that were posted on Facebook*

Local name	Date Posted	Frequency	
		Reaction	Comments
Ubod han Anahaw	October 1, 2022	111	40
	February 24, 2022	64	70
Ubod han Dabong	February 26, 2022	128	55
	March 4, 2021	104	24

According to Altoveros et al. (2019), Anahaw (*Livistonia rotundifolia*) is one of the seven palm species that serve as a source of Ubod in the Philippines. They also identified four bamboo species in which Ubod is excised. A general comment to the FB post about Ubod from Anahaw is that it has a bitter taste. Monterde et al. (2021) reported that Bamboo shoots (dabong) are sold as fresh-cut vegetables in supermarkets and wet markets in Davao City in the Philippines.

3.2 Edible Fruits

Table 2 shows a total of thirteen fruits from Jipapad that were posted on Facebook. These are: Kalapi, Halawihaw, Diis, Kurong, Tugop, Birongkot, Lobi-lobi, Atis, Tindok, Magongbong, Panaon, and Tarun nga mapait. Kalapi is the fruit of the rattan. Rattan is one of the non-timber forest products of E. Samar. A study by Madulid in 2000 revealed that there were 15 commercial species of rattan in the island of Samar and that several species, such as the *Calamus spp.*, were overharvested and critically endangered. Kalapi is usually collected and sold in the locality. Comments on the FB post showed many liked it because of its sour and sweet taste. Halawihaw, Diis, and Kurong are small sour fruits from locally growing trees. The fruit has one seed inside it. They are usually eaten fresh; however, the Diis is sometimes added as seasoning to fish soup. Meanwhile, Tugop is a fruit of the *Artocarpus sericarpus* tree known as *Pedalia*. Many commented that it has a delicious pulp. Then the seeds called Ropgas are collected, cleaned, dried, and roasted. Ropgas tastes like peanuts and is also compared to the seeds of the sunflower, squash, and pumpkin.

Birongkot is the local name for *Passiflora foetida* or stinking passionflower. Its small fruit contains many small seeds enclosed in bluish-white pulp. It is liked for its sweet-sour taste. A net-like structure surrounds the fruit. There was a comment that it tastes just like Lobi-lobi, which is also a small fruit and is encapsulated by a thin pouch-like membrane. It belongs to the genus *Physalis*. The Atis belongs to the genus *Annona*. However, the Atis in Jipapad looks more like the Guyabano than the usual fruit called by such a name in other parts of the Philippines. Its fruit

has short, soft spines. It contains many seeds and a yellow pulp. Several FB users commented that it has a strong odor. Tindok is one of the longest and largest bananas in Jipapad. Tindok is a banana cultivar that has no male bud (Gueco et al., 2022). Its fruit can be more than one foot long. However, it produces a bunch of bananas with only two or more hands. It is usually cooked with coconut milk and sugar.

Table 2. *The edible fruits from Jipapad that were posted on Facebook*

Local name	Date Posted	Frequency	
		Reaction	Comments
1. Kalapi	September 18, 2022	90	42
2. Halawihaw	August 9, 2022	151	68
	February 25, 2022	179	124
3. Diis	June 11, 2022	92	79
4. Kurong	May 19, 2021	131	87
5. Tugop and Rupgas (seeds)	April 24, 2021	226	101
6. Birongkot	April 9, 2021	128	56
7. Lobi-lobi	August 19, 2022	2	1
8. Atis	August 2, 2021	89	71
9. Tindok	September 15, 2021	71	19
10. Magongbong	December 9, 2020	143	99
11. Panaon	Dec. 7, 2020	140	37
	October 5, 2022	32	11
12. Tagbak	May 4, 2021	134	80
13. Tarun nga mapait	October 5, 2022	181	59

Magongbong is the fruit of a herbaceous plant known as Tagbak (*Alpinia elegans* or *Kolowratia elegans*) in the Philippines. However, in Jipapad, the Tagbak is a different kind of plant. Magongbong, Panaon, and Tagbak are edible plants in Jipapad that have similar stems and leaves. However, Magongbong grows in the upper part of the plant, Panaon is above the ground, while Tagbak is underground. According to the comments made in the FB post, Magongbong tastes sour, and the fruit has many seeds. Others mentioned that it only produces a few fruits, and it smells good when ripe. While for Panaon, FB users commented on its smell to determine if it is already ripe. It has a fragrant odor when ripe. All three fruits have many seeds. Moreover, according to the FB users, when they were small children, they usually ate all the seeds, resulting in constipation. Moreover, for Panaon, when children eat a lot of the fruit, there is a noticeable odor in their urine. Tarun nga mapait is the fruit of a native eggplant that is bitter. Unlike the regular eggplant that is purple and long, the Tarun nga mapait is small and green. It is usually cooked as a vegetable with coconut milk.

3.3 Edible Rootcrop, Corm or Tuber

Rootcrops, tubers, and corms play an important role as alternative food in times of emergency, such as during typhoons and flooding, when rice supply is limited or lacking. For a municipality like Jipapad, which is easily submerged in flood water, having such a crop would help ensure that food is available for the people. The edible root crops, tubers, or corms that were posted and shared on Facebook were: Apari, Palawan, and Bagong (Table 3). Swamp taro (*Cyrtosperma chamissonis*) and elephant foot yam (*Amorphophallus campanulatus*) are the edible aroids (Araceae) that are underexploited (Chauhan et al, 2022). Palawan is a giant swamp taro, while Bagong is the elephant foot yam.

Table 3. *The edible corm, rootcrop, and tuber from Jipapad that were posted on Facebook*

Local name	Date Posted	Frequency	
		Reaction	Comments
1. Palawan	August 4, 2021	107	22
	February 1, 2021	102	12
2. Bagong	December 6, 2020	124	69
3. Apari	January 21, 2022	56	42
	February 1, 2021	63	4

Palawan has edible corms and shoots. Most of it is just collected from the wild. It is usually cooked with coconut milk. Due to limited supply, it is often harvested and served during special occasions or in emergencies when there is no rice. Bagong is a root crop of the genus *Amorphophallus*. It has been documented as widely grown in the municipality of San Roque, Northern Samar, by Abalajen-Bande and Villas in 2019. However, there is no record yet of its widespread cultivation in Jipapad, Eastern Samar. Based on the FB users' comments to its post, it is usually harvested during Christmas and New Year and served as "inog-og." It is a process of cooking root crops,

tubers, or corms by boiling them with coconut milk and sugar until they are tender. Others boil it and eat it by dipping it in salt. Meanwhile, Apari, according to the FB post, is one of the tasty rootcrops in Jipapad because of its sweet taste. However, another one countered that sometimes it has a bland taste. It has a thin brown outer layer with plenty of tiny roots. The flesh inside is white. It is considered a lesser yam with the scientific name *Dioscorea esculenta*.

3.4 Edible Leafy Vegetables

Two under-utilized plants in Jipapad with edible leaves were posted by FB users (Table 4). These are the Agitway and Pako that are consumed as cooked vegetables or fresh salad. Agitway is sometimes grown in backyards, while Pako is collected from the wild, oftentimes in areas near the rivers and forests.

Table 4. *The edible leafy vegetables from Jipapad that were posted on Facebook*

Local name	Date Posted	Frequency	
		Reaction	Comments
1. Agitway	October 5, 2022	181	59
2. Pako	September 20, 2015	37	19

These two underutilized indigenous vegetables have been reported in the project “Documentation of Indigenous Vegetables in the Philippines” by the University of the Philippines, Los Baños, and the Department of Science and Technology. They published a series of pamphlets on “Indigenous Vegetables of the Philippines” in 2018, and Pamphlet No. 1 is Lagikway (*Abelmoschus manihot*) or the Agitway. Pamphlet No. 8 is Pako, with the scientific name *Diplazium esculentum*.

3.5 Edible Seeds or Grains

Two edible seeds or grains in Jipapad were posted on Facebook (Table 5). These are Sibada and Dawa. Based on the comments made, both plants used to be present in newly opened kaingin area, which is locally termed “kiwa”, combined with the “pinugas” or sown upland rice. The seeds are pounded and then cooked as porridge.

Table 5. *The edible seeds or grains from Jipapad that were posted on Facebook*

Local name	Date Posted	Frequency	
		Reaction	Comments
1. Sibada	May 8, 2021	32	16
2. Dawa	May 8, 2021	39	25

Using Google image search, it was found that Sibada is sorghum, while Dawa is millet. Both are cereal grains that are nutritious and drought-tolerant. Why it is no longer being cultivated and consumed in Jipapad is worth investigating. However, in the Philippines, there is renewed interest in promoting these minor crops as an alternative to rice (Narciso & Nyström, 2020).

3.6 Edible Flowers

Two kinds of edible flowers found in Jipapad were posted on Facebook (Table 6). The first is from the Malaejang tree. Its flowers resemble those of an orchid. Its shoots and leaves are also edible. It has a sour taste, and the flowers are eaten fresh. The leaves and shoots can be added to soups. According to the comments made, it is often found growing near places where there is water. The second one is the Puso han saging or pakol. Pakol is a wild type of banana that contains many seeds. Puso han saging or pakol, translated as the heart of the banana, actually refers to its flower. It is also known as the banana male bud or banana blossom (Soni & Saxena, 2021). The image posted on FB showed that Puso han saging is much shorter and stouter than the Puso han pakol, which is more elongated. Both are either eaten as a salad after boiling with water or cooked as a vegetable with coconut milk.

Table 6. *The edible flowers from Jipapad that were posted on Facebook*

Local name	Date Posted	Frequency	
		Reaction	Comments
1. Mala-ejang	March 3, 2022	84	53
2. Puso han saging ngan Pakol	October 1, 2022	2	

Researches already conducted regarding the banana blossom in the Philippines and other countries included development of products such as banana blossom sisig (Salvador, 2018), banana blossom incorporated nut

chocolate (Komal & Kaur, 2019), banana blossom powder (Anand & Sharma, 2020), and as ingredient for functional food (Lau et al., 2020).

3.7 Edible Mushrooms

FB posts showed the presence of Ligbos, Banay, Talungog, and Kurakdot in Jipapad (Table 7). In addition, comments made by FB users mentioned other kinds of mushrooms, but without photos posted. Ligbos are usually found growing on the soil and collected from the ground. According to the comments on the post “kalagsim hit sabaw,” which signifies there is a unique taste to it. They also said that there is plenty of it sprouting on the ground in September and after thunderstorms. Google image search showed that it is probably *Termitomyces cartilaginous*, and it is also called Ligbos or Uhong in other parts of the Philippines. There were comments made about Oyaping, which looks like Ligbos but grows on the decaying stem of banana and abaca. However, no photo of such a mushroom was shown posted by the Jipapad FB users under this study.

Table 7. The edible mushrooms from Jipapad that were posted on Facebook

Local name	Date Posted	Frequency	
		Reaction	Comments
1. Ligbos	September 1, 2022	123	53
	May 5, 2021	89	30
2. Banay	December 3, 2020	105	49
3. Kurakdot or Purakdit	April 9, 2021	116	48
4. Talungog	April 1, 2022	16	13

Banay are small mushrooms that grow on decaying trees. Someone commented that it is tastier than the Kurakdot. However, it is tough to eat when already “banggal”. Google image search revealed it is most probably an oyster mushroom of the genus *Pleurotus*. Commercial cultivation and research on several species of *Pleurotus* have been going on in the Philippines (Alvarez & Bautista, 2021; Villaceran Jr et al., 2023).

Kurakdot or purakdit are smaller than Banay and grow on trees, decomposing leaves or the coconuts and decaying stems of bamboos, especially when wet or after a rainy day/night. There were plenty of comments on how tasty it is when “tinugmak ta medjo tubod tubod”, a process of cooking wherein the mushroom is wrapped in a banana leaf and grilled. Others like it are cooked with coconut milk, mixed with other vegetables, or boiled and seasoned with a small quantity of salt.

They said that wherever there is “kiwa” and it rains, the Kurakdot, Banay, and ulaping will sprout. Most of the time it was found growing on trees that were felled and burned after kaingin or in newly opened areas planted with upland rice. Talungog is soft and gelatinous when fresh and becomes hard and rubbery when dried. Some call it “bat’s ear” or “rat’s ear”. In Tagalog, it is called “taingang daga,” and it belongs to the genus *Auricularia* (Tantengco & Ragraio, 2018). Some commented that they do not like it compared to the other mushrooms. However, they were surprised to find it popular as dried mushrooms being sold in the market as an ingredient to “pancit” or noodles.

4.0 Conclusion

A documentation of the underutilized edible indigenous and wild resources present in Jipapad, Eastern Samar, Philippines was done by scanning posts on Facebook that were made by those from the municipality or those who went there. The search only focused on the photos of the researcher’s friends and their friends on FB, as well as pages related to Jipapad. Comments regarding the resources and their characteristics that were made by FB users and friends of those who posted were noted. Google Image search was done to find more information about the posted resource, and Google Scholar was used to search for publications regarding the under-utilized resources.

Result of the study revealed the following were posted in FB: two edible shoot or stems (Ubod from Anahaw and Dabong), thirteen fruits (Kalapi, Halawihaw, Diis, Kurong, Tugop, Birongkot, Lobi-lobi, Atis, Tindok, Magongbong, Panaon, and Tarun nga mapait), three edible rootcrop, tuber or corm (Apari, Palawan, and Bagong), two under-utilized leafy vegetables (Agitway and Pako), two edible seeds or grains (Sibada and Dawa), two edible flowers (Malaejang and Puso han saging or pakol) and four edible mushrooms (Ligbos, Banay, Talungog, and Kurakdot).

It was observed that most of those who made comments had access to the internet and were already located away from the municipality. They recalled the resources as being eaten by them when they were still young children. Some identified resources may not be as abundant as they were during their younger days. The photos posted were not necessarily taken firsthand, so there may be some differences in the actual appearance of the original resource that existed in the locality. A field visit and documentation with interviews of Key informants, such as elderly individuals and farmers, is recommended. Such activity would give a better and more detailed idea of the richness of the municipality in terms of indigenous edible resources and help them to utilize it properly for genetic conservation and commercialization.

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Sole authorship.

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7.0 Conflict of Interest

There is no conflict of interest.

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