

Banjar Tribe's View on the Ethnobotanical Value of Pineapple Plants in Tamban Catur

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Abstract: The pineapple plant (*Ananas comosus*) that has been cultivated by the Tamban Catur community is mostly only consumed and traded so that the potential benefits of pineapple plants have not been fully utilised and understood by the community, especially the current generation. Therefore, this study focuses on the ethnobotanical value of pineapple plants in Tamban Catur. Research was conducted by describing local knowledge about the use, benefits, and cultural context related to pineapple plants in the daily lives of people in Tamban Catur. This study aims to reveal the urgency of the ethnobotanical value of pineapple plants in Tamban Catur and its implications in maintaining traditions amid the dynamics of changing times. Field surveys and structured interviews with local residents collected data on traditional uses, treatments, and cultural views related to pineapple plants. The research results show the crucial role of pineapple plants in various aspects of Tamban Catur people's lives including in the culinary field, health, and even in the implementation of local ceremonies and traditions. This paper provides an in-depth understanding of the importance of the pineapple plant in the context of cultural heritage and local knowledge, while supporting efforts to preserve traditional knowledge in the modern era.

Keywords: Banjar, Benefits, Local Knowledge, Pineapple, and Plant.

Introduction

Plants are organisms that are deliberately planted by someone or another party to be used as food and cultivated (Shofiyah and Hakim, 2020; Amboupe et al. 2019). These plants are usually consumed either directly or after being processed, used as decoration, medicine, and others (Indriani and Artika, 2022; Kurniawan and Setiawan, 2021). Plant utilisation has been carried out since the time of the ancestors to meet the needs of life (Ashari and Salatalohy, 2021; Kurniati et al. 2022; Jepriani and Maulana, 2022; Mariani et al. 2021). The use of plants by a community forms a pattern related to culture. Culture not only determines the type of food, but also for whom and under what circumstances the food is consumed (Aziz and Hasna, 2021; Cita, 2020; Lestari et al. 2023; Wakhidah and Silalahi, 2020; Julia et al. 2020).

Therefore, local culture can determine the type of food, how it is processed, and how it is served.

The science that studies the relationship between humans and surrounding plants without exploitation is ethnobotany (Darmadi, 2021; Dahlianah et al. 2021; Balick and Cox, 2020; Amalia et al. 2021). This science arises from the knowledge of local communities about the use of plants, both as food, medicine, and wild plants to support life (Dianci et al, 2022; Suardika et al. 2023; Ito, 2019; Liliyanti et al. 2021; Julung et al. 2021). Ethnobotany describes the relationship between culture and plant use, including how plants are utilised, cared for, and valued as beneficial to humans. Examples of uses include food, medicine, cosmetics, dyes, clothing, ceremonies, and people's daily lives (Ege et al. 2022; Hakim, 2021; Prayogi et al. 2022; Robi and Kartikawati, 2019; Dahlianah et

al. 2021; Azzikri et al. 2020; Liswandari and Setiowati, 2023).

Ethnobotany is a branch of science that explores interactions between humans and plants in the environment (Islamia, 2021; Iskandar et al. 2022; Kastiwi, 2022). Ethnobotany focuses on how local people use plants (Febta, 2021; Fauziah, 2023; Fhandika and Wahid, 2020). Ethnobotany as an analysis of the relationship between plants and cultural elements in certain ethnic communities. The science of ethnobotany involves exploring how humans use plants in their daily routines and this becomes information passed down from generation to generation through oral narratives (Zubair et al. 2019; Nadirah et al. 2022; Sari and Setyawati, 2019; Tan and Syamsiah, 2022; Firdawati et al. 2021; Sarina et al. 2022; Fadil, et al. 2022; Adelina, 2022; Fasya, 2023).

However, technological transformation and changes in social dynamics that occur today do not prevent people from continuing to use plants in traditional medicine, meeting food needs, and as construction materials, while still maintaining and caring for local traditional values (Pranaka et al. 2020; Purwanti, 2020; Rafdinal et al. 2023). The importance of ethnobotany explores direct human interactions with surrounding plants, with local communities often honing their use of wild plants after gradually discovering their benefits. This pattern encourages plant cultivation for the sake of environmental balance and meeting needs, as well as safeguarding knowledge passed down from generation to generation through oral narratives (Adiningsih, 2021; Hidayati et al. 2022; Sigana, 2021; Nainggolan et al. 2021; Nurrosyidah et al. 2020; Fenturi, 2020; Hadi et al. 2021; Maretik et al. 2023). In conclusion, ethnobotany combines anthropological, botanical, and linguistic dimensions to explore the use of plants by diverse ethnic and cultural groups throughout the world.

One of the areas where crop utilisation is quite optimal is Tamban Catur. Tamban Catur is one of the sub-districts in Central Kalimantan, Kapuas Regency. Tamban Catur is geographically strategically located on the causeway that borders the province of South Kalimantan. Tamban Catur has an area of ± 14 km² and is divided into 10 villages. According to the Central Bureau of

Statistics of Kapuas Regency (2020) and the results of observations, the condition of land resources in Tamban Catur consists of wetlands almost $\pm 75\%$ of the area is a stretch of wetlands in the form of lowland lebak swamps, lowland peatlands, and tidal lowlands and the rest is dry soil which is used for yards and settlements, plantations, fields and other uses. So, from the geographical conditions of the Tamban Catur area, it becomes a food crop producing area, with one of the characteristics of the region being pineapple plants.

Pineapple plant it contains nutrients such as minerals and vitamins which are good for the body. These contents are vitamin A and vitamin C, so the processing of pineapple fruit also improves the health level of the population (Affandi and Thresye, 2019; Kusumawati et al. 2020). The pineapple plant has a Latin name *Ananas comosus* (L.) Merr has a morphology with short stems, leaves with parallel veins from the base to the tip and stringy, thick, spiny leaf edges, and the fruit is compound parthenocarpic which aggregates from the fruit. The pineapple plant is an annual plant that lives in wet swamps. Pineapple plants have two varieties that grow in swamp land, namely pineapple paun and pineapple tamban (Hartono et al. 2020; Hardianto et al. 2021; Setiarini et al. 2019; Habibi, 2022; Habibi et al. 2021; Wahyudin et al. 2021; Alif et al. 2023; Norr and Sulaeman, 2022; Megawati et al. 2020).

But along with the times, knowledge related to ethnobotany that is written makes knowledge in the community, especially among teenagers, still small. This is because ethnobotanical knowledge in the community usually occurs from generation to generation through oral and unwritten. Based on the results of observations carried out, teenagers tend to consider local knowledge about food plants as something uncool and outdated. So that many of them prefer to migrate to the city rather than work in agriculture or plantations (Pradita, 2022). As a result, the declining interest of the younger generation in agriculture and food crops raises concerns and worries that the quality of the agricultural sector will be reduced.

In addition, the loss of traditional knowledge is one of the main factors threatening biodiversity conservation. Ethnobotanical knowledge of the

community in Tamban Catur needs to be developed into written knowledge. So that the chances of local knowledge can survive and concerns about the decline of the agricultural sector can be minimised. In addition, preserving local knowledge requires integrating community knowledge into written reading materials. These reading materials can be used as adequate teaching materials in the future and can be a medium in producing potential human resources. Collecting local knowledge is done with a study related to the ethnobotanical value of pineapple plants in Tamban Catur.

Materials and Methods

Study area

The research was conducted with field research through a qualitative approach to describe local knowledge about the use, benefits, and cultural aspects related to pineapple plants in the daily lives of people in Tamban Catur. The goal is to reveal the urgency of the ethnobotanical value of pineapple plants in Tamban Catur and its implications in maintaining the sustainability of traditions amid the dynamics of changing times. Data collection was conducted through field survey methods and structured interviews with local residents. The data collected included information on the traditional use of pineapple plants and cultural perceptions associated with pineapple plants within the community.

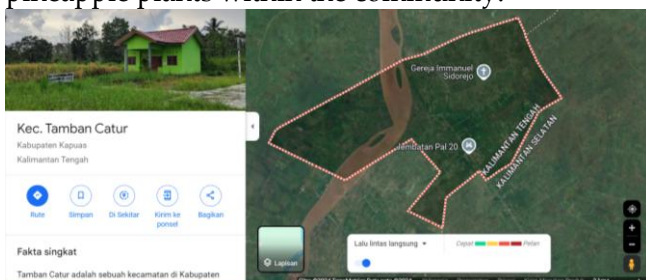


Figure 1. Location of Tamban Catur area found on maps

Procedures

1. Preparatory Stage

Determining the research location by choosing a location that is relevant to the ethnobotanical study of pineapple plants. The location was in Tamban Catur and ensured that the research location had access to informants who

understood the use of pineapple plants such as pineapple farmers, traditional leaders, or local people who had in-depth knowledge about the use of pineapple plants. Informants were selected based on their insight and role in the community.

After that, an interview guide was developed. Construct a semi-structured interview guide that includes questions about the use of pineapple plants in everyday life, whether as food, medicine, cosmetics, or cultural symbols. Create questions that are able to explore ethnobotanical values in depth. Next, conduct Instrument Testing. Conduct a pilot test of the interviews with several informants to ensure the effectiveness of the interview guide, as well as to ensure that the questions are clearly understood.

2. Conducting Interviews

Data collection was conducted during semi-structured interviews. The questions asked remained open-ended to allow informants to speak freely and in depth about the cultural, economic, social values and uses of the pineapple plant. This makes the technique a qualitative approach because it uses a naturalistic approach that allows researchers to become part of the community environment. Avoid influencing or directing informants' answers to maintain the authenticity of the data.

After that, data recording is done in the form of documenting the interview through a voice or video recorder with the informant's consent. Manual note-taking can also be done to summarise the key points of the informants' answers. In addition to interviews, direct observations were made on the practice of pineapple plant utilisation in the field, such as processing, serving, use in traditional events, or others relevant to ethnobotanical values.

3. Transcription and Data Processing

After the interviews were completed, the results of the interviews were transcribed to facilitate analysis. Each conversation was recorded in detail, especially the parts related to the ethnobotanical value of pineapple plants. After that, group the data based on the main themes that emerged from the interviews. Create codes

for each theme related to ethnobotanical aspects such as medicine, food, culture and economy.

4. *Qualitative Data Analysis*

Sort out relevant and significant interview data related to the research. Group information based on main themes such as the use of pineapple in customs, daily life, or as medicine. Next, present the coded data in the form of descriptive narratives or concept maps. This is to make it easier for researchers to see the relationship between cultural values and the use of pineapple plants in the community. After all the data has been analysed, draw conclusions about the ethnobotanical value of pineapple plants in people's lives. For example, how pineapple plants contribute to the local economy, cultural symbolism, or traditional uses.

5. *Data Validation*

Data validation is done by comparing information obtained from interviews with field observations, literature, or relevant documents. This was done to ensure the accuracy of the data. Verify the data again with the informants, especially on the parts that need clarification, to ensure that the interpretation of the data is in line with their views.

6. *Report Preparation*

The analysed data were compiled into a final report that included a description of the ethnobotanical value of pineapple plants in various aspects such as economic, social, cultural and environmental. Emphasis was placed on a qualitative approach to explore the meaning of pineapple use in the local context.

Data analysis

1. *Data collection*

Data obtained through interviews with key informants, such as farmers, traditional leaders, or local communities, were recorded and recorded in detail. Interviews were conducted using semi-structured guides, allowing researchers to obtain rich and in-depth information related to the use of pineapple plants in daily life. During the data collection process, researchers also conducted field observations to complement the information

obtained from the interviews, making the data more comprehensive.

2. *Data Transcription*

The recorded interviews were then transcribed in detail. Every word and sentence spoken by the informants was written down to produce text that was ready to be analysed. This transcription was done carefully so that no important information was missed.

3. *Data Coding*

After the transcription is complete, the next step is coding the data. At this stage, key themes or categories relevant to the ethnobotanical value of pineapple plants were identified from the interviews. For example, categories such as the utilisation of pineapple plants as food, medicine, cultural symbols, or local economy. The codes assisted the researcher in grouping and organising the data according to specific themes.

4. *Data reduction*

Data obtained from interviews and observations were then reduced, i.e. data relevant to the research objectives were selected, while less significant or redundant data were ignored. This process helped simplify complex information to focus on key points related to the ethnobotanical value of pineapple plants.

5. *Data Presentation*

After the data has been reduced and coded, the results are presented in the form of a clear and systematic narrative. This data presentation aims to facilitate researchers in understanding the patterns and relationships between community culture and the utilisation of pineapple plants. In addition to narratives, tables, diagrams, or concept maps can also be used for data visualisation.

6. *Drawing Conclusions*

Based on the results of data analysis, researchers drew conclusions about the ethnobotanical value of pineapple plants. These conclusions were based on patterns that emerged from the interviews, such as how people utilise pineapples in their lives, the role of culture and traditions associated with the plant, and its impact on the local economy. The researcher

also linked these findings with relevant literature to strengthen the results of the study.

7. Data Validation

To ensure the validity of the research results, researchers used data triangulation. Information obtained from interviews was compared with observations and other relevant sources. In addition, reconfirmation with informants was conducted to ensure that the researcher's interpretation was in line with the local community's understanding.

8. Reporting the Results

The final analysis of the qualitative data is outlined in a research report that explains how the pineapple plant has important ethnobotanical values in the community, including aspects of food, culture, health and economy. The report also includes recommendations or key findings that can be used for further development.

Results and Discussion

The Tamban area is divided into two regions, namely Tamban located in Batola Regency, South Kalimantan, and Tamban Catur located in Kapuas Regency, Central Kalimantan. The majority of the population is Muslim and comes from the Banjar tribe. Tamban Catur is a transmigration area in Central Kalimantan that has developed since around 2000. Tamban Catur consists of several villages such as Bandar Mekar, Bandar Raya, Sido Mulyo, Sidorejo, Tamban Baru Mekar, Tamban Baru Tengah, Tamban Baru Timur, Tamban Jaya, Tamban Makmur, and Warna Sari. In this region, many pineapple plants are found.

This is due to pineapple cultivation carried out by the local community to improve the economy in the plantation sector. Pineapple plants in the Tamban area have unique characteristics, with large fruit, the size of a human head, thick skin, and greenish colour. Apart from being consumed directly, pineapples are also processed into various food products, such as jams, cakes, chips, pickles, and juices. Because of this uniqueness, pineapples have become an icon of the area with the nickname "*Kanas Tamban*".

The word "*Kanas*" is derived from the pronunciation in the Banjar tribal language, which has an iconic characteristic with a Malay-Dayak pronunciation. This is due to the Banjar people's interaction with the Dayak language and the Malay language family, so their pronunciation tends to pronounce the letter 'A' with a certain accent. The influence of multilingualism also appears in the Banjar language, so that it has similarities with Indonesian, although not entirely similar.

Based on the field observation data obtained, pineapple belongs to the Bromeliaceae family. The plant has fibrous roots, a short and thick stem, and leaves that grow spreading from the base with a sword-like shape and fibre texture. The tips of the leaves are sharp with spiny edges. The flowers are purplish-red in colour and grow at the upper end of the stalk, while reproduction occurs through budding. The pineapple fruit is large, with green skin and yellow flesh and high moisture content.

According to interviews, pineapples have significant economic potential as well as cultural values that are closely related to local wisdom, such as environmental welfare, cultivation, and cultural practices that reflect local beliefs. Most of these influences make pineapple plants have ethnobotanical value in Tamban Catur.

Most people in Tamban Catur Village sell pineapple seeds taken from the crown of the plant and the fruit in traditional markets or to collectors who come directly to their gardens. Pineapple fruit is also often consumed directly, mixed in dishes or processed into various speciality foods and drinks, such as jam, dodol, nata de coco, juice, beer and traditional tuak.

Based on interviews with informants, pineapples are also known to have sociological and anthropological values. During harvests or festivals, the community works together in gotong royong activities. This is to strengthen the relationship between neighbours. In addition, the pineapple crown is believed to have magical powers to repel the supernatural creature "*Kuyang*" because the sharp pineapple crown is believed to hurt the creature. In addition, pineapples are also widely planted next to houses as a fence for security and are considered to have magical powers to repel evil spirits.

Culturally, the pineapple plant is considered a sacred symbol that symbolises prosperity. Pineapples are also often used as a treat in Banjar traditional proposal ceremonies as a symbol of politeness and hospitality, and are believed to bring good luck to the bride-to-be and her family.

The yellow colour of the fruit flesh is believed to symbolise prosperity and glory, and reminds us of our ancestors. The yellow colour of the fruit of the pineapple plant characterises the Banjar Sultanate because it means victory and prosperity. Pineapple plants are also often planted and become iconic on bridge railings, stairs of old Banjar houses, mosque domes, and fence posts.

In addition, people also believe that young pineapples can be used as a natural contraceptive before modern birth control pills. In addition, the leftover pineapple skin and leaves are often used as compost to fertilise other plants and protect them from pests.

Conclusions

Based on the results of the study, pineapple plants have a very important role in various aspects of the life of the Tamban Catur community which includes the culinary sector, health, and the implementation of local ceremonies and traditions. The results of this study provide a deeper understanding of the ethnobotanical value of pineapple plants in the framework of cultural heritage and local knowledge. In addition, this research supports efforts to preserve traditional knowledge in the midst of a changing modern era. So this confirms that pineapple plants are not just food and trade, but become cultural assets that play a central role in the identity of the Tamban Catur community. In addition, pineapple plants in Tamban Catur can provide opportunities to maintain the sustainability of traditions in the midst of changing times.

References

Adelina YE. 2022. Pengelolaan Pemanfaatan Tumbuhan Obat Pada Suku Dayak Kelurahan Sei Pasah Kecamatan

- Kapuas Hilir. *Health Research Journal of Indonesia* 1(2): 37-42.
- Adiningsih U. 2021. Pemanfaatan Etnobotani Pada Masyarakat Alue Padee Kecamatan Kuala Batee Sebagai Media Pembelajaran Materi Keanekaragaman Hayati di SMAN 4 Abdya Kabupaten Aceh Barat Daya. [Doctoral Dissertation]. UIN Ar-raniry, Aceh. [Indonesian]
- Affandi P, & Thresye T. 2019. Olahan buah penganan kanas tamban (O-BUNGAS) berbasis tepat guna di Desa Tamban Raya, Kecamatan Mekarsari, Kabupaten Barito Kuala; In *PRO SEJAHTERA (Prosiding Seminar Nasional Pengabdian kepada Masyarakat)*, Mei 2019. [Indonesian]
- Alif M., Septiana N., & Bahriyah EN. 2023. Pemanfaatan Media Sosial Bagi Petani di Lahan Rawa Pasang Surut Desa Sungai Kambat. *KOMUNIKOLOGI: Jurnal Ilmiah Ilmu Komunikasi* 20(1): 51-60.
- Amalia Y., Hasanuddin H., Asiah A., Wardiah W., & Andayani D. 2021. Inventory of Plant Types Used in Postpartum Care in Singkil District, Aceh Singkil Regency. *Jurnal Ilmiah Mahasiswa Pendidikan Biologi*, 6(4): 25-36.
- Amboupe DS., Hartana A., & Purwanto Y. 2019. Ethnobotanical study of food plant in Bentong community from Barru regency, South Sulawesi-Indonesia. *Med Konserv*, 2019. 24 (3): 278-86. [Indonesia]
- Ashari R., & Salatalohy A. 2021. Keanekaragaman Tumbuhan Obat di Sekitar Hutan Dusun Totodoku Kecamatan Wasile Timur Kabupaten Halmahera Timur. *Jurnal Hutan dan Masyarakat*. 13(2): 92-101.
- Aziz YS., & Hasna N. 2021. Kajian Etnomedicine Tumbuhan Obat Antiinflamasi Pada Masyarakat Samin Kecamatan Margomulyo Bojonegoro. *Jurnal Farmasi & Sains Indonesia* 4(2), 12-18.
- Azzikri A., Wardana ST., & Harmida H. 2020. Etnobotani Tumbuhan Obat Solanaceae Pada Masyarakat Suku Kerinci Di Wilayah Lempur Kabupaten Kerinci Provinsi Jambi. *Sriwijaya Bioscientia* 1(2): 44-47.
- Balick MJ., & Cox PA. 2020. *Plants, People, and Culture: The Science of Ethnobotany*. Garland Science, Prancis.
- Cita KD. 2020. Etnobotani tumbuhan pangan yang dimanfaatkan oleh suku Sunda di Dusun Nyangkewok, Desa Kalaparea, Kabupaten Sukabumi, Indonesia. *Asian Journal of Ethnobiology* 3(1): 16-22.
- Dahlianah I., Arwinsyah A., & Sari KJ. 2021. Kajian Etnobotani Masyarakat Desa Manggaraya Kecamatan Tanjung Lago Kabupaten Banyuasin. *Klorofil: Jurnal Penelitian Ilmu-Ilmu Pertanian* 16(2): 117-121.
- Darmadi AAK. 2021. Analisis pengetahuan dan sikap Masyarakat Desa Penglipuran, Bangli terkait upaya pelestarian dan konservasi tumbuhan Upacara Ngaben berdasarkan Tri Mandala. *Jurnal Pendidikan Biologi Undiksha* 8(2): 27-42.
- Denni Y. 2023. Formulasi dan Uji Efektivitas Gel Ekstrak Buah Mengkudu (*Morinda Citrifolia* L.) dan Lidah Buaya (*Aloe Vera* L.) Terhadap Luka Bakar pada Mencit (*Mus*

- Musculus*). [Doctoral Dissertation]. UIN Raden Intan, Lampung. [Indonesian]
- Dianci PD., Triyanti M., & Harmoko H. 2022. Inventarisasi Jenis-Jenis Tumbuhan Obat Di Kecamatan Saling Kabupaten Empat Lawang. *Borneo Journal of Biology Education (BJBE)* 4(2): 116-125.
- Ege B., Julung H., Supiandi MI., Mahanal S., & Zubaidah S. 2022. Utilization of Local Fruits as Food Source for the Dayak Jangkang Tribe, West Kalimantan; In *IOP Conference Series: Earth and Environmental Science*, IOP Publishing 978(1), February 2022. [Indonesian]
- Anggraini T., Utami S., & Murningsih M. 2018. Kajian etnobotani tumbuhan yang digunakan pada upacara pernikahan adat Jawa di sekitar Keraton Kasunanan Surakarta Hadiningrat. *Jurnal Akademika Biologi* 7(3): 13-20.
- Fasya GHI. 2023. Studi Kearifan Lokal Etnobotani Tumbuhan Obat Suku Baduy Luar Desa Kanekes Kecamatan Leuwidamar Kabupaten Lebak Provinsi Banten. [Doctoral Dissertation]. Universitas Islam Negeri Maulana Malik Ibrahim, Malang. [Indonesia]
- Fathimah Fauziah A. 2021. Studi Etnobotani Tanaman Edible dan Tanaman Obat yang Dikonsumsi oleh Masyarakat di Desa Curugrendeng.
- Febta, DB. 2021. Kajian Etnobotani pada Pengobatan Tradisional Masyarakat Suku Jawa di Kecamatan Buay Madang Timur Kabupaten Oku timur [Doctoral Dissertation]. UIN Raden Intan, Lampung. [Indonesian]
- Fenturi MERIN. 2021. Etnobotani Tumbuhan Obat Suku Penukal Di Desa Benuang Kecamatan Talang Ubi Kabupaten Penukal Abab Lematang Ilir Sumatera Selatan. [Thesis]. Universitas Sriwijaya, Palembang. [Indonesian]
- Fhandika B., & Wahid A. 2020. Pemanfaatan Tumbuhan Obat Oleh Masyarakat Di Desa Watatu Kecamatan Banawa Selatan Kabupaten Donggala Sulawesi Tengah. *Jurnal Warta Rimba*, 8(4): 283-292.
- Firdawati K., Syamswisna S., & Fajri H. 2021. Etnobotani Tanaman Pangan dari Masyarakat Desa Mekar Pelita Kecamatan Sayan Kabupaten Melawi. *Bioscientist: Jurnal Ilmiah Biologi* 9(2): 402-411.
- Habibi I. 2022. Business Development Training by Taking Pineapple Leaf Fiber in Ngancar Farmers' Group. *Soeropati: Journal of Community Service* 4(2): 135-141.
- Habibi I., Irawati T., Helilusiatiningsih N., & Soenyoto E. 2021. Pelatihan dan Pendampingan Pengembangan Kapasitas Usaha Klasterisasi Pengolahan Buah Nanas Menjadi Sari Buah dan Selai Nanas. *JPM (Jurnal Pemberdayaan Masyarakat)* 6(2): 717-723.
- Hadi MA., Latifah S., Aji, IML., Valentino N., & Prasetyo, AR. 2023. Keanekaragaman Jenis Tumbuhan Obat di Hutan Kemasyarakatan Wana Lestari Desa Karang Sidemen. *Journal of Forest Science Avicennia* 6(1): 26-38.
- Hakim L. 2021. Agroforestri kopi: mendorong taman hayati dan wisata kopi. Media Nusa Creative, MNC Publishing.
- Hardianto ES., Rusmadi R., & Wahidah BF. 2021. Identifikasi Morfologis Jenis-jenis Tumbuhan Edible di Gunung Muria Provinsi Jawa Tengah. *Bioscientist: Jurnal Ilmiah Biologi* 9(1): 189-195.
- Hartono A., Adlini MN., Ritonga YE., Tambunan MIH., Nasution MSU., & Jumiah JU. 2020. Identifikasi Tumbuhan Tingkat Tinggi (Phanerogamae) Di Kampus II UINSU. *Jurnal Biolokus: Jurnal Penelitian Pendidikan Biologi Dan Biologi* 3(2): 305-312
- Hidayati NLD., Alifiar I., & Nurhasanah N. 2022. Kajian Etnobotani Tumbuhan Obat Masyarakat Desa Mekarmulya Kecamatan Pamarican Kabupaten Ciamis. In *Prosiding Seminar Nasional Diseminasi Hasil Penelitian Program Studi S1 Farmasi* 2(1): 204-213, Desember 2022. [Indonesian]
- Indriani A., & Artika W. 2022. Ragam Tumbuhan Berpotensi Obat Terhadap Infeksi Mikroorganisme di Seunagan Timur. *Jurnal Jeumpa* 9(1): 684-689.
- Iskandar D., Widodo N., Warsito W., Masruri M., & Rollando R. 2022. A Review on Ethno-Medicinal Plants Used in West Kalimantan. *International Journal of Agricultural Sciences* 6(1): 27-41.
- Islamia NF. 2021. Etnobotani Ramuan Pasca Persalinan oleh Masyarakat Kecamatan Modung Kabupaten Bangkalan Provinsi Jawa Timur. [Doctoral Dissertation]. Universitas Islam Negeri Maulana Malik Ibrahim, Malang. [Indonesian]
- Ito MF. 2019. Kajian Etnofarmakologi Penggunaan Tanaman Obat oleh Masyarakat di Kecamatan Soa Kabupaten Ngada. [Doctoral Dissertation]. Poltekkes Kemenkes, Kupang. [Indonesian]
- Jepriani N., & Maulana F. 2022. Pemanfaatan Tanaman Obat Tradisional oleh Suku Dayak Ma'ayan Desa Kalamus Kecamatan Paku Kabupaten Barito Timur. *Jurnal Pendidikan Hayati* 8(2): 61-87.
- Julia L., Oramahi HA., & Hardiansyah G. 2020. Etnobotani Tumbuhan Sumber Pangan Masyarakat Dayak Bidayuh di Desa Hli Buei Kecamatan Siding Kabupaten Bengkayang. *Jurnal Hutan Lestari* 8(3): 653 – 667.
- Julung H., Ege B., Supiandi MI., Mahanal S., & Zubaidah S. 2021. Identifikasi Tanaman Pangan yang Dibudidayakan di Masyarakat Suku Dayak Jangkang, Dusun Kobang, Desa Jangkang Benua, Indonesia. In *Proceeding Biology Education Conference: Biology, Science, Enviromental, and Learning* 18(1): 72-82. Desember 2021. [Indonesian]
- Kastanja AY., & Patty Z. 2022. Potensi Tumbuhan Obat Tradisional dan Pemanfaatan Pada Masyarakat Galela, Halmahera Utara (Studi Kasus di Desa Soatobaru, Kecamatan Galela Barat). *Jurnal Ilmiah agribisnis dan Perikanan (agrikan UMMU-Ternate)* 15(1).
- Kastiwi E. 2022. Studi Etnobotani Tumbuhan sebagai Obat Antipiretik di Masyarakat Desa Sundawenang Kecamatan Salawu Kabupaten Tasikmalaya. [Doctoral Dissertation] Universitas BTH, Tasikmalaya. [Indonesian]

- Kurniati Y., Hernawati D., & Putra RR. 2022. Etnobotani Tanaman Pangan di Desa Cigedug Kabupaten Garut. *SAINTIFIK*, 8(2), 151-158.
- Kurniawan HC., & Setyawan BW. 2021. Upacara Adat Sedekah Gunung sebagai Sarana Mitigasi Bencana Letusan Gunung Merapi berbasis Local Wisdom. *Al Kawnu: Science and Local Wisdom Journal* 1(1): 6-16.
- Kusumawati I., Purwanti R., & Afifah DN. 2020. Analisis Kandungan Gizi dan Aktivitas Antioksidan pada Yoghurt dengan Penambahan Nanas Madu (*Ananas Comosus* Mer.) dan Ekstrak Kayu Manis (*Cinnamomum Burmanni*). *Journal on Nutrition College* 8(4): 196-206.
- Lestari F., Jayanti RD., Andriansah A., Pratama FA., & Wijaya GA. 2023. Identifikasi Tumbuhan Obat Masyarakat Pedalaman Dusun Iii Sri Pengantin Kecamatan Stl Ulu Terawas Kabupaten Musi Rawas. *Jurnal Riset dan Inovasi Pendidikan Sains (JRIPS)* 2(1): 1-14.
- Liliyanti M., Mariani Y., & Yusro F. 2021. Pemanfaatan tumbuhan obat untuk perawatan rambut oleh Suku Dayak Kantuk di Desa Seluan Kabupaten Kapuas Hulu Kalimantan Barat. *Bioma: Jurnal Ilmiah Biologi* 10(2): 228-247.
- Liswandari AV., & Setiowati FK. 2023. Ethnobotany of Medicinal Plants of the Sumba Tribes in Central Sumba Regency, East Nusa Tenggara Timur. *Biotropika: Journal of Tropical Biology* 11(2): 84-93.
- Maretik M., Erfina E., & Humaira M. 2023. Etnomedisin Tumbuhan Obat Tradisional Masyarakat Pakue.
- Mariani Y., Wardenaar E., & Yusro F. 2021. Tumbuhan berkhasiat obat di Desa Tanap Kabupaten Sanggau dan pemanfaatannya untuk perawatan bayi dan perempuan pasca persalinan. *JBIO J Biosains J Biosci* 7(2): 92-102.
- Megawati M., Wardoyo ERP., & Rafdinal R. 2020. Etnobotani Tumbuhan Pangan Masyarakat Dayak Kanayant di Desa Babane Kecamatan Samalantan Kabupaten Bengkayang Kalimantan Barat. *Protobiont* 9(2): 142-151.
- Mulyanah WIWIN. 2019. Etnobotani tumbuhan yang dimanfaatkan sebagai obat penyakit pada anak-anak di Desa Colo Kecamatan Dawe Kabupaten Kudus Jawa Tengah. [Thesis]. Universitas Islam Negeri Walisongo, Semarang. [Indonesian]
- Nadirah P., Destiara M., & Istiqamah I. 2022. Etnobotani Serai Wangi (*Cymbopogon nardus* (L.) Rendle) Desa Batang Kulur Kecamatan Kelumpang Barat Kotabaru. *Al Kawnu: Science and Local Wisdom Journal* 1(2): 63-68.
- Nainggolan AM., Anhar A., & Rasnovi S. 2021. Pengetahuan Etnobotani Suku Batak di Kecamatan Sipirok, Sumatera Utara. *Jurnal Ilmiah Mahasiswa Pertanian* 6(4): 1021-1030.
- Noor M., & Sulaeman Y. 2022. Pemanfaatan dan Pengelolaan Lahan Rawa: Kearifan Kebijakan dan Keberlanjutan. UGM PRESS, Yogyakarta.
- Noor M., Saleh M., & Subagio H. 2015. Potensi Keanekaragaman Tanaman Buah-Buahan di Lahan Rawa dan Pemanfaatannya. *Jurnal Biodiversitas Indonesia*, 1(1): 1348-1358.
- Nurrosyidah IH., Riya MA., & Ma'ruf AF. 2020. Studi etnobotani tumbuhan obat berbasis pengetahuan lokal di Desa Seloliman Kecamatan Trawas Kabupaten Mojokerto Jawa Timur. *Jurnal Riset Kefarmasian Indonesia* 2(3): 169-185.
- Pradita D. 2022. Pewarisan Sistem Pengetahuan Pada Masyarakat Perkebunan di Mento Toelakan. *Candra Sangkala* 4(1): 10-20.
- Pranaka RN., Yusro F., & Budiastutik I. 2020. Pemanfaatan tanaman obat oleh masyarakat Suku Melayu di Kabupaten Sambas. *Jurnal Tumbuhan Obat Indonesia* 13(1): 1-24.
- Prayogi J., Wardenaar E., & Kartikawati SM. 2022. Etnobotani Bahan Pangan Masyarakat Dusun Pematang Merbau Desa Sungai Awan Kiri Kecamatan Muara Pawan Kabupaten Ketapang. *Jurnal Hutan Lestari* 10(2): 319-332.
- Purwanti A. 2020. Etnobotani dan Persepsi Konservasi Tumbuhan Obat oleh Suku Melayu Sanggau Kabupaten Sanggau Provinsi Kalimantan Barat. [Doctoral Dissertation]. Universitas Islam Negeri Maulana Malik Ibrahim, Malang. [Indonesian]
- Rafdinal R., Yulinda E., & Wardoyo ERP. 2023. Pemanfaatan Tumbuhan dalam Ritual Balenggang Oleh Suku Dayak Bakati Desa Kalon Kecamatan Seluas Kabupaten Bengkayang (The Use of Plants in the Balenggang Ritual by the Dayak Bakati Tribe of Kalon Village, District as Wide as Bengkayang Regency). *Jurnal MIPA* 12(2): 61-67.
- Robi Y., & Kartikawati SM. 2019. Etnobotani Rempah Tradisional di Desa Empoto Kabupaten Sanggau Kalimantan Barat. *Jurnal Hutan Lestari* 7(1): 130-142.
- Sari, L. Y. S., & Setyawati, R. 2019. Etnobotani Tumbuhan Ritual yang Digunakan pada Upacara Jamasan di Keraton Yogyakarta. *Bioma: Jurnal Biologi Makassar*, 4(2): 99-106.
- Sarina A., Harmida H., & Aminasih N. 2022. Etnobotani tumbuhan obat Suku Ogan di Desa Beringin Dalam Kecamatan Rambang Kuang Kabupaten Ogan Ilir. *Sriwijaya Bioscientia* 3(3): 105-115.
- Setiarini AW., Djafar A., & Ikhsan S. 2019. Tataniaga Nanas Tamban di Desa Mekarsari Kecamatan Mekarsari Kabupaten Barito Kuala. *Frontier Agribisnis* 3(2): 98-106.
- Shofiyah A., & Hakim L. 2020. Etnobotani Tanaman Pangan dari Hutan dan Pekarangan Rumah pada Masyarakat di Pemukiman Kondang Merak, Malang Selatan. *Biotropika: Journal of Tropical Biology* 8(2): 98-105.
- Sinaga, MES. 2021. Etnobotani Tanaman Pekarangan sebagai Ramuan Mandian Tradisional pada Masyarakat Suku Simalungun, Kecamatan Raya, Kabupaten

- Simalungun. In: Prosiding Webinar Nasional VII Biologi dan Pembelajarannya. Pascasarjana Universitas Negeri Medan, 27 Oktober 2021. [Indonesian]
- Suardika IWG., Dewi NMWA., & Megawati F. 2023. Penggunaan Obat Herbal dalam Upaya Swamedikasi atau Pengobatan Sendiri pada Penyakit Batuk Dan Flu. *Usadha* 2(2): 9-18.
- Tan, A. Y., & Syamsiah, S. 2022. Etnobotani Tumbuhan Obat Masyarakat Etnis Buton. *Jurnal Biotek*, 10(1), 1-35.
- Wahyudin R., Lukmayani Y., & Sadiyah ER. 2021. Penelusuran Pustaka Potensi Aktivitas Antibakteri Ekstrak Kulit Buah Nanas (*Ananas comosus* L. Merr). *Prosiding Farmasi*, 564-572.
- Wakhidah AZ., & Silalahi M. 2020. Inventarisasi Tanaman Pekarangan dan Pemanfaatannya sebagai Bahan Pangan oleh Masyarakat Tanjungan, di Kabupaten Tanggamus, Lampung. *Jurnal Pendidikan Matematika dan IPA*, 11(2): 243-256.
- Zubair Z., Suleman SM., & Ramadanil R. 2019. Studi Etnobotani Tumbuhan Obat pada Masyarakat Kaili Rai di Desa Wombo Kecamatan Tanantovea Kabupaten Donggala Sulawesi Tengah. *Biocelebes* 13(2): 182-194.