

Utilization of Traditional Medicinal Plant Species in Seberang Pebenaan Village, Indragiri Hilir Regency, Riau Province.

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Abstract. Community knowledge about the traditional medicinal plants of Seberang Pebenaan Village has never been published. Traditional medicine is just a memory from parents. If this knowledge is not documented, over time it will slowly disappear, and the next generation will no longer be able to preserve the knowledge about medicinal plants from generation to generation. This research aims to find out the type of plant, how to process medicinal plants. The type of research used is descriptive qualitative with 50 subjects. Data collection techniques using observation sheets, interviews that have been validated by experts according to their field. The results of this research show that there are 25 families of 39 plant species. The part of the organ that is most widely used is the leaves, which are processed by boiling, grating, pounding, kneading, squeezing directly.

Key words: Seberang Pebenaan Village, medicinal plants

INTRODUCTION

Indonesia is a tropical country with high humidity, which supports the growth of various types of plants. It is known as the country with the second-highest biodiversity in the world after Brazil. Indonesia's forests are very rich in medicinal plants, with around 20,000 species, of which 1,000 have been documented, and 300 species have been utilized as traditional medicine (Hariana, 2005). Besides being an archipelagic country, Indonesia also has a large population of over 200 million people, most of whom still live in rural areas.

Medicinal plants are types of plants where all parts or cells can be used as medicine, ingredients, or medicinal concoctions (Siswanto, 2004). These medicinal plants are used to cure or prevent diseases, either through self-preparation or with the help of village shamans. The utilization of plants as traditional medicine plays a very important role, both in the context of public health and cultural preservation. In terms of health, medicinal plants provide natural treatment alternatives that are often more affordable and accessible, especially to people living in rural areas. Additionally, the use of medicinal plants is also part of local wisdom that has been passed down from generation to generation, thus playing a crucial role in preserving and maintaining traditional culture and knowledge.

Plants can be used as traditional medicine because they contain various active compounds that have therapeutic effects. Natural chemical compounds in plants, such as alkaloids, flavonoids, terpenoids, saponins, and tannins, can provide beneficial pharmacological effects. For example, alkaloids in certain plants can function as analgesics (pain relievers) or even have anti-cancer properties. Another advantage of medicinal plants is that their side effects are often milder compared to synthetic drugs, although this is not always the case, and they still need to be used cautiously. In fact, many modern medicines originated from compounds first discovered in plants. For instance, aspirin was

initially developed from salicin, a compound found in the bark of the willow tree. For these reasons, plants have great potential for use in traditional medicine. This potential continues to be the subject of research, with the aim of developing new, more effective, and safer medicines.

Seberang Pebenaan Village, located in Indragiri Hilir Regency, has long utilized plants as medicinal ingredients for various diseases. Traditionally, all layers of society in this village, from children to the elderly, regularly consumed traditional herbal medicines known as jamu. However, nowadays, this tradition is preserved only by a small number of people, especially among the elderly. As a result, the presence of herbal medicines is gradually being neglected and is at risk of disappearing if not preserved and passed on to the next generation.

Based on interviews conducted on November 15, 2023, the head of Seberang Pebenaan Village stated that this village is located in Indragiri Hilir Regency, Riau Province. Seberang Pebenaan Village has a population of approximately 3,655 people, spread across 969 households, with an area of 6,800 km². The village consists of 11 irrigation channels, but only 5 of them still use traditional medicine: Parit Musyawarah, Parit Latim, Parit Bahagia, Parit Pelam, and Parit Baru. The distance from these channels to the center of Indragiri Hilir Regency is relatively far, making access to healthcare services very limited. The majority of Seberang Pebenaan Village residents work as farmers and planters, supported by the village's abundant natural resources. The people of this village still use plants as traditional medicine for several reasons, including the long distance to the nearest health center, the high cost of healthcare facilities, and the simple economic conditions of the community. The knowledge of the Seberang Pebenaan Village community about traditional medicinal plants has never been published. Generally, traditional medicinal practices in this village are based only on the memories of the elderly, the knowledgeable, or people who have long used medicinal plants. If this knowledge is not documented soon, there

is a high likelihood that this valuable information will gradually disappear, making it impossible for the next generation to preserve this knowledge in a hereditary manner.

Based on the above background, the author is interested in conducting research titled "Utilization of Traditional Medicinal Plant Species in Seberang Pebenaan Village, Indragiri Hilir Regency, Riau Province."

MATERIALS AND METHODS

Metode penelitian yang digunakan dalam studi ini adalah deskriptif kualitatif. Teknik yang digunakan meliputi observasi, wawancara, dokumentasi, serta identifikasi tumbuhan yang memiliki khasiat sebagai tumbuhan obat di Desa Seberang Pebenaan. Tumbuhan-tumbuhan ini dianalisis secara kualitatif dengan cara mengelompokkan jenis tumbuhan berdasarkan nama daerah, nama latin, bagian yang dipakai, serta manfaatnya.

Teknik penentuan responden yang digunakan dalam kajian ini adalah "snowball sampling". Menurut Sugiyono (2013: 134), teknik snowball sampling termasuk dalam teknik non-probability sampling, di mana sampel dipilih dengan probabilitas yang tidak sama. Snowball sampling adalah teknik penentuan sampel yang dimulai dari jumlah yang kecil dan kemudian berkembang menjadi lebih besar. Teknik ini secara khusus digunakan untuk mengumpulkan data yang bersifat komunitas berdasarkan subjektivitas responden atau sampel. Proses penentuan responden dimulai dengan memilih satu atau dua orang yang dianggap relevan. Namun, jika informasi yang diperoleh dari dua orang ini dirasa belum lengkap, peneliti akan mencari orang lain yang dianggap lebih tahu dan mampu melengkapi data yang diberikan oleh responden sebelumnya. Proses ini berlanjut hingga jumlah sampel semakin banyak atau hingga data yang diperoleh dianggap sudah jenuh, artinya tidak ada informasi baru yang muncul dari penambahan sampel.

Data Collection Techniques

Observation

Observation is a complex process that involves various biological processes, with memory and perception being the most important. Observation is a method of collecting data through direct observation of an object in a certain period, with systematic recording of the things observed. (Noor, 2011: 78). In this study, observation is used to gain a general overview of the research object and how it is directly utilized by the community. This observation allows the researcher to understand the context, conditions, and practices occurring in the field, ensuring that the data obtained is richer and more accurate..

Interviews

An interview is a direct data collection process involving the asking of various questions to the informants (Subagyo, 2006: 39). In this study, interviews were conducted to gather data on the types of plants used by the community of Seberang Pebenaan Village, Keritang Subdistrict, Riau Province. An interview is a meeting between two people aimed at exchanging information and ideas through questions and answers, to build a shared understanding of a particular topic. The interviews conducted in this study were structured interviews. The researcher used a systematically arranged interview guide that covered only the main points of the questions. If the respondent's answers deviated from the expected topic, the researcher could ask follow-up questions to obtain more accurate answers. Each question was designed to inventory the

respondent's knowledge of plants that can be used as traditional medicine. The respondents' answers were recorded on interview sheets or recorded using a voice recorder during the interview. Interviews were conducted by visiting the respondents' homes to ensure that the data collected was accurate and relevant to the research topic.

Documentation

Documentation of the plants used as medicine was done by taking photos of the plants, while documentation of the interviews was conducted using a voice recorder (mobile phone) as the informants provided information about traditional medicinal plants. This documentation aims to support the research and serves as a reminder to ensure accurate identification of the studied plants, avoiding errors. Through visual and audio documentation, the obtained data can be more easily verified and reused in analysis or as a reference in the future.

Plant Identification

Plant identification is the process of grouping plant species based on observable similarities among the plants. This process involves determining the identity of a plant, including its correct name and its place in the classification system. Identification is usually conducted at the species level or, at the very least, at the genus level. In this study, plant identification was done using references from applications and websites such as the PlantNet Plant Identification app and the Plantamor website. These tools assist in determining the identity and classification of plants with greater accuracy.

Data Analysis Techniques

Data analysis is the process of organizing and processing data obtained from various sources, such as interviews, field notes, photos, official documents, and personal documents. Data obtained from the field is presented in tabular form and analyzed descriptively.

Data analysis

Data Primer

Data primer merupakan data yang diperoleh dari lapangan. Berupa wawancara dengan masyarakat di Desa Seberang Pebenaan, dokumentasi, atau berbagai keterangan berkaitan dengan tujuan penelitian.

Data Sekunder

Data sekunder adalah data yang mendukung data primer dan diperoleh dari sumber-sumber yang telah ada sebelumnya. Data ini biasanya meliputi informasi yang diambil dari Jurnal, Artikel, Koran, Buku, Internet. Data sekunder digunakan untuk melengkapi informasi yang diperoleh dari lapangan, memberikan konteks tambahan, dan memperkuat temuan dari data primer. Ini membantu dalam pemahaman yang lebih mendalam dan memberikan dasar teoritis atau latar belakang yang mendukung hasil penelitian.

Sumber Data

Sumber data diperoleh dari hasil wawancara, dokumentasi lapangan juga dari internet berupa jurnal terkait studi etnobotani, serta artikel.

RESULTS AND DISCUSSION

Types of Medicinal Plants Used by the Bugis, Malay, and Javanese Ethnic Groups in Seberang Pebenaan Village, Indragiri Hilir Regency

Based on interviews with 50 respondents in Seberang Pebenaan Village, 39 types of plants were found to be used as traditional medicine, spread across 25 families. The *Zingiberaceae* family is the most widely used by the local community. This is consistent with the research by Asep et al. (2017: 7), which shows that the *Zingiberaceae* family is characterized by its rhizomes that contain essential oils. Plants from this family, whether cultivated or wild, are still widely used today. The research by Ningrum et al. (2022: 4) also supports this finding, stating that *Zingiberaceae* plants are easily found in markets, particularly in Grobogan Regency, and have significant economic value, both as food ingredients (spices and vegetables) and as traditional medicines. On the other hand, the families least used by the community are *Manispermaceae*, *Crassulaceae*, *Rutaceae*, *Fabaceae*, *Lamiaceae*, *Malvaceae*, *Alliaceae*, *Thymelaeaceae*, *Rubiaceae*, *Asphodelaceae*, *Annonaceae*, *Compositae*, *Bombacaceae*, *Moringaceae*, *Arecaceae*, *Caricaceae*, *Melastomataceae*, and *Solanaceae*. These families may be less used in traditional medicine for several reasons, such as the plants being known as weeds or having active compounds that are less popular or less effective compared to other families. For example, *Manispermaceae* has some plant species used in traditional medicine, but they may not be as popular as other families with more well-known active compounds (Pitopang et al., 2022: 17).

The types of plants used by the community in Seberang Pebenaan Village as traditional medicine are mostly obtained from home gardens or forests around their homes. This indicates that the community utilizes the natural resources available around them for their health needs. The research by Anisa et al. (2023: 17) in Semata Village found that the community there also uses plants as traditional medicine, most of which are obtained from home gardens. The majority of Semata Village residents intentionally plant medicinal plants around their homes or in their gardens to easily access them when needed. Planting medicinal plants around the home not only facilitates access when needed but also contributes to environmental conservation by reducing pressure on forests due to direct plant harvesting.

Table 1. Types of Plants Used as Traditional Medicine in Seberang Pebenaan Village

No	Family Name/ Common Name	Picture	Source
1.	<i>Poaceae</i> / Alang-alang		Garden
2.	<i>Zingiberaceae</i> / Bangle		Home Garden
3.	<i>Manispermaceae</i> / Brotowali		Home Garden

No	Family Name/ Common Name	Picture	Source
4.	<i>Crassulaceae</i> / Cocor Bebek		Home Garden
5.	<i>Zingiberaceae</i> / Jahe Merah		Home Garden
6.	<i>Myrtaceae</i> / Jambu biji		Home Garden
7.	<i>Rutaceae</i> / Jeruk nipis		Home Garden
8.	<i>Euphorbiaceae</i> / Jarak pagar		Home Garden
9.	<i>Euphorbiaceae</i> / Jarak merah		Home Garden
10.	<i>Fabaceae</i> / Ketepeng cina		Home Garden
11.	<i>Lamiaceae</i> / Kumis Kucing		Home Garden
12.	<i>Zingiberaceae</i> / Kencur		Home Garden
13.	<i>Malvaceae</i> / Kembang sepatu		Home Garden

No	Family Name/ Common Name	Picture	Source
14.	<i>Alliaceae</i> / Bawang putih		Home Garden
15.	<i>Zingiberaceae</i> / Lengkuas		Home Garden
16.	<i>Thymelaeaceae</i> / Mahkota Dewa		Home Garden
17.	<i>Rubiaceae</i> / Mengkudu		Home Garden
18.	<i>Asphodelaceae</i> / Lidah buaya		Home Garden
19.	<i>Piperaceae</i> / Sirih cina		Home Garden
20.	<i>Piperaceae</i> / Sirih Merah		Home Garden
21.	<i>Piperaceae</i> / Sirih Hijau		Home Garden
22.	<i>Poaceae</i> / Serai		Home Garden
23.	<i>Poaceae</i> / Serai Merah		Home Garden
24.	<i>Myrtaceae</i> / Daun salam		Home Garden
25.	<i>Annonaceae</i> / Sirsak		Home Garden

No	Family Name/ Common Name	Picture	Source
			
26.	<i>Compositae</i> / Sambung Nyawa		Home Garden
27.	<i>Bombacaceae</i> / Randu		Forest/ Garden
28.	<i>Moringaceae</i> / Kelor		Home Garden
29.	<i>Arecaceae</i> / Pinang		Home Garden
30.	<i>Caricaceae</i> / Pepaya		Home Garden
31.	<i>Poaceae</i> / Tebu Hitam		Home Garden
32.	<i>Euphorbiaceae</i> / Betadin		Home Garden
33.	<i>Euphorbiaceae</i> / Katuk		Home Garden
34.	<i>Zingiberaceae</i> / Kunyit		Home Garden
35.	<i>Acanthaceae</i> / Keji Beling		Garden
36.	<i>Zingiberaceae</i> / Kunyit Putih		Home Garden

No	Family Name/ Common Name	Picture	Source
			
37.	<i>Acanthaceae</i> / Gandarus		Forest/ Home Garden
38.	<i>Melastomataceae</i> / Senduduk		Home Garden
39.	<i>Solanaceae</i> / Ciplukat		Home Garden

Processing and Use of Plants as Traditional Medicine in Seberang Pebanaan Village

In Bukit Wargainan Village, the Malay and Javanese communities utilize various medicinal plants, particularly their leaves, according to the research findings of Titi et al. (2023:378). Therefore, directly processing the leaves and drying them to extend their shelf life makes their use as medicine quite simple. The leaves are easy to extract for use in traditional medicine due to their soft texture and high moisture content, as stated by Armanda and Fahmy (2018:7). Research by Fauzy and Asy'ari (2020:6) shows that leaves contain a wealth of components. Examples of organic substances include alkaloids, glycosides, essential oils, and chlorophyll, which possess antimicrobial properties.

The use of medicinal plant leaves is a rational way to conserve medicinal plants, according to Nurrani and Tabba (2015:7), and can help preserve these plants. The plant's ability to survive will not be negatively affected by using the leaf organs as therapeutic components. The ease with which leaf organs can be crushed and the quality or essence of these healing plants can be extracted explains why the Rimba Community extensively uses leaves. The Maybrat community also predominantly uses leaves as therapeutic components, as noted by Susanti (2023), because leaves are where photosynthesis accumulation occurs, containing organic materials or compounds with medicinal properties.

Table 2. Number of Plant Organs Used by the Seberang Pebanaan Village Community

NO.	PLANT ORGANS	NUMBER
1.	Root	1
2.	Stem	6
3.	Leaf	34
4.	Rhizome	13
5.	Fruit	5
6.	Flower	2
7.	Tubers	2

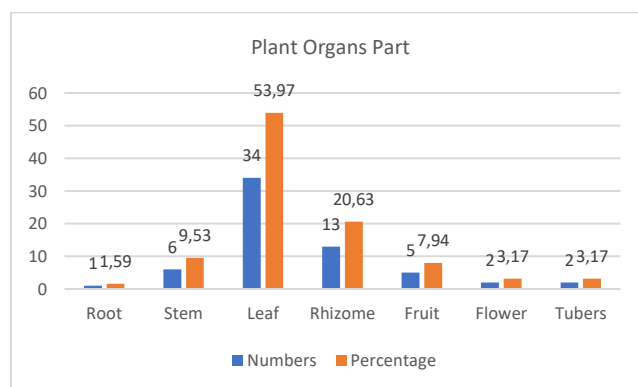


Figure 1. Plant Organ Parts Used By the Seberang Pebanaan Village

Plants in Seberang Pebanaan Village can be processed in various ways to create traditional medicines, such as boiling, grating, pounding, squeezing, and extracting. Table 3 shows that boiling is the most commonly used processing method because it concentrates the beneficial compounds in the plant into a water solution that can be consumed for therapeutic purposes. Many people believe that boiling plants can kill germs because this procedure is safer and releases more plant components. Boiling medicinal plants can reduce bland and bitter tastes compared to consuming them raw, and it also enhances sterility by eliminating harmful bacteria and germs (Fitria et al., 2019: 182).

Botanikam (2011:7) states that boiling is done to ensure that all beneficial compounds in the medicinal plants dissolve into the boiling water. Meanwhile, Maridi's research (2015:105) shows that boiling medicinal plants can be a very simple and efficient treatment method. Boiled medicinal plants can be used for bathing or consumed directly. Indigenous forest people claim that consuming such herbal remedies can cure physical and emotional ailments. Squeezing is the least commonly used processing method today, due to the limited availability of plant components in the local area (Duri et al., 2022: 22).

Table 3. Processing Methods and Benefits of Plants Used as Traditional Medicines by the Malay Tribe in Seberang Pebanaan Village.

No.	Nama Tumbuhan	Khasiat	Cara Pengolahan
1.	Alang -alang	Sore throat	Prepare and clean several alang-alang roots, then boil until it reaches a boil. Strain and let cool. Drink in the morning.
2.	Bangle	Fever, Jaundice	Prepare and clean several bangles, then grate until fine to obtain bangle juice. Drink twice a day.
3.	Brotowali	Rheumatism, High fever	Prepare and clean Brotowali stems, then slice into small

			pieces. Boil until it reaches a boil, strain, and let cool. For rheumatism, drink twice a day. For fever, drink while warm in the morning and evening.
4.	Cocor bebek	High fever	Take 1 leaf of Cocor bebek, clean it, then crush. Apply the crushed leaf to the forehead.
5.	Red ginger	Bloating, Fever	Prepare and clean several red gingers, slice into small pieces, then boil until it reaches a boil. Cool and strain. Drink twice a day during fever.
6.	Guava	Diarrhea	Take several young guava leaves, and eat them directly.
7.	Lime	Cough	Take 1 lime, squeeze to extract the juice, then strain. Add sweet soy sauce to the lime juice.
8.	Jarak pagar	Bloating, Rheumatism	Take 5 leaves of Jarak pagar, boil until it reaches a boil, then cool.
9.	Jarak merah	Swelling	Take several red Jarak merah leaves, pound until fine, then apply to the swollen area.
10.	Ketepeng cina	Ringworm, Scabies	Take 3 leaves of Ketepeng Cina, clean, then pound until fine. Apply the mixture to the affected area.
11.	Cat's whiskers	Diabetes	Take several cat's whiskers leaves, boil until it reaches a boil, then strain and cool. Drink to help manage diabetes.
12.	Aromatic ginger	Diarrhea	Prepare and clean several aromatic ginger,

			slice into small pieces, then boil until it reaches a boil. Strain and cool. Drink twice a day during diarrhea.
13.	Hibiscus	Fever	Take 1 hibiscus leaf, slightly crush it, then apply it to the head.
14.	Garlic	Itching	Prepare 1 clove of garlic, peel, and apply it to the itchy area.
15.	Lengkuas	Diarrhea	Prepare sufficient lengkuas, grate until fine, then squeeze to obtain the juice. Add sugar and salt to the galangal juice.
16.	God's crown	Diabetes	Take 4 young leaves of Crown of God, clean, then boil until it reaches a boil. Cool, then drink.
17.	Noni fruit	High blood pressure	Take 1 noni fruit, clean, then cut into pieces. Put into a blender, add one glass of water, and blend until smooth. Pour into a glass and drink.
18.	Aloe vera	Burns	Take 1 aloe vera leaf, split it, and take the slime. Apply the slime to the burn.
19.	Sirih cina	Gout	Take several Sirih cina leaves, clean, then boil until it reaches a boil. Cool, then drink.
20.	Sirih merah	Nosebleeds, Cholesterol	Take 1 leaf, clean, then roll into a small size as needed to address nosebleeds. For cholesterol, take 3 Sirih merah leaves, clean, then boil until it reaches a boil. Cool, then drink.

21.	Sirih hijau	Eye cleaner	Prepare several Sirih hijau leaves, boil until it reaches a boil, then cool. Use the water to clean the eyes.
22.	Lemongrass	Flu	Prepare several lemongrass stalks, crush until flat, then boil until it reaches a boil. Strain and cool the lemongrass water, then drink during flu.
23.	Red Lemongrass	Broken bones	Prepare several red lemongrass leaves or stalks, clean, then pound. Cook with added coconut oil until the oil comes out of the lemongrass. Apply the mixture to the broken or sprained bone.
24.	Bay Leaves	Cholesterol, High blood pressure	Prepare and clean several bay leaves, then boil until it reaches a boil. Strain, cool, and drink twice a day.
25.	Soursop	Gout	Prepare 4 soursop leaves, clean, then boil until it reaches a boil. Cool, then drink.
26.	Sambung nyawa	Cough	Prepare 5 sambung nyawa leaves, clean, then crush. Pour hot water, let cool, then drink.
27.	Randu	Fever	Prepare 1 randu leaf, crush until slightly wilted. Apply a little vegetable oil to the randu leaf, then place it on the head.
28.	Moringa	Cholesterol	Prepare several moringa leaves, crush until slightly wilted, then boil until it

			reaches a boil. Cool, then drink.
29.	Betel Nuts	Diarrhea	Prepare several ripe betel nuts, take the inside, then boil until it reaches a boil. Drink while still warm.
30.	Papaya	Malaria	Prepare several papaya leaves, boil until it reaches a boil, then strain and cool. Drink twice a day.
31.	Tebu hitam (Sugarcane)	Fever	Prepare and clean several sugarcane stalks, squeeze to extract the juice, then drink.
32.	Bethadin	Wounds	Take 1 stem, break to release the sap, then apply to the wound.
33.	Turmeric	Cough	Prepare sufficient turmeric, grate until fine, then squeeze to obtain the juice. Add honey or palm sugar, then drink twice a day.
34.	Katuk	Constipation	Take several leaves, clean, then boil until it reaches a boil. Drink the warm boiled water.
35.	Keji beling	Boils	Prepare several keji beling leaves, clean, then pound until fine. Apply the paste to the boil.
36.	White Turmeric	Stomach ulcers	Take 3 white turmeric, clean, then grate until fine. Mix with warm water, strain, and drink.
37.	Gandarusa	Wounds	Prepare 4 gandarusa leaves, clean, then pound until fine. Apply the paste to the wound.
38.	Noni leaves	Boils	Take 3-4 noni leaves, clean, then pound until

			fine. Mix with kerosene, then apply the mixture.
39.	Senduduk	Fever	Prepare and clean several senduduk leaves, boil until it reaches a boil, then cool and strain. Drink twice a day.
40.	Ciplukat	Chickenpox	Take 1 ciplukan tree consisting of roots, stems, leaves, and fruit. Boil until it reaches a boil.

CONCLUSION

Based on the discussion regarding the utilization of plants as traditional medicine in Seberang Pebenaan Village, 39 types of medicinal plants from 25 families have been identified. In this village, medicinal plants are processed using various methods, including boiling, grating, pounding, crushing, squeezing, and using directly. Out of the total, 21 types of plants are processed by boiling, 5 types by grating, 3 types by crushing, 2 types by squeezing, 6 types by pounding, and 4 types are used directly.

Recommendations

There needs to be an effort to preserve the ancestral culture of traditional medicinal plants by today's younger generation as a heritage to be passed on to future generations. Conservation of medicinal plants is necessary to prevent their extinction, and this can be achieved at both the household level and by government initiatives.

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