

Analysis of Medical Plant in North Nias: Ecolinguistic Study

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ABSTRACT : *The Nias tribe is one of the tribes in Indonesia who inhabit the western part of the island of Sumatra. Indonesia has a very large forest area, where almost two-thirds of Indonesia's land area is forest area. However, the existence of this vast forest area has not been optimally utilized by the community or the government, due to the fact that forest management is still timber oriented. One of the roles of forests that are less than optimal in their utilization is medicinal plants, on the other hand, Indonesia's forest areas have a very high biodiversity. This study uses a qualitative approach that has. The purpose of this study was to determine the basic commodities of agriculture, forestry, and fisheries in each sub-district in North Nias Regency and to understand the phenomena experienced by the research subjects. including trees or plants that have medicinal properties. Of the 40,000 species of flora that exist in the world as many as 30,000 species are found in Indonesia and 940 species of which are known to be efficacious as drugs that have been used in traditional medicine for generations by various ethnic groups in Indonesia. The number of medicinal plants covers about 90% of the number of medicinal plants found in the Asian region. Therefore, through this paper, it is hoped that the management of natural medicinal ingredients in the forest can be given more attention and can be utilized optimally by all parties including the government, industry, and the community. Vegetable Gardening with the People of North Nias.*

KEYWORDS – *Ecolinguistics, Vegetable Lexicon, Medical Plant*

I. INTRODUCTION

This tribal community lives in an area with various exciting potentials in terms of population, social life, history, customs, fauna and abundant biodiversity. The geographical location of Nias, which is separated from the plains of Sumatra, makes this island rich in plant genetic resources, ranging from grasses, herbs, shrubs, and trees. The experience of the Nias people towards nature has created a variety of lexicons of traditional medicinal plants in li niha (the local language of Nias). The lexicon is a container that stores the meaning of the expression of a language whose meaning cannot be determined based on the meaning of its main elements (Saifullah, 2018). In the Big Indonesian Dictionary, it is stated that the lexicon is a vocabulary; language component that contains all information about the meaning and use of words in the language and; the richness of words owned by a language (Depdiknas, 2008).

As language is born from the interaction or relationship of the environment with the speaking community, language is impossible to develop and survive if it is outside the environment or speech community (Wira et al., 2022). Thus, how a person creates a lexicon and builds his linguistic abilities can be directly illustrated by the experiences he gets from the environment recorded in his cognitive (Mbetse et al., 2020). Furthermore, the experience is applied in specific communication between people in their social life (Nuzwaty, 2014).

Vegetables are one of the essential foods for the human body, in addition to fruits, carbohydrates, and proteins. Vegetables are parts of plants such as leaves, petioles, buds, flowers, stems, roots, sweet potatoes, and fruit. Vegetables are the primary source of vitamins, minerals, and phytochemicals that contain dietary fiber, which is good for health (Teo, 2001). Vegetables have various types to be made into various culinary creations, one of which is cassava leaves. Cassava leaf (*Amaranthus tricolour* L) is one type of cassava leaf that humans widely consume. Cassava leaves contain vitamins, proteins, carbohydrates, fats, minerals, iron, magnesium, potassium, calcium and manganese (Prasetyono, 2012). Cassava leaves help reduce the risk of cancer, facilitating the digestive system, reducing cholesterol, being antidiabetic and losing weight (Dalimartha, 2008). Although cassava leaves have benefits and good nutritional content, cassava leaves also contain allergenic compounds, namely goitrogen, purine and oxalate compounds. The content of oxalate can cause kidney failure, which is because calcium absorption is not going well. Calcium oxalate crystals are formed in the body due to oxalate, which combines with calcium. These crystals will settle and, if collected, will enlarge to form kidney stones, which will block the urinary tract (Astawa, 2019). People often process spinach into vegetables and spinach should not be reheated and left for a long time because the substances contained in cassava leaves can turn into poison (Girsang, 2011) namely the content of oxalic acid will increase (Suwardi, 2011).

Meanwhile, interviews were conducted to find the basis for naming the lexicon in the North Nias language and the metaphor of the lexicon found. Then the data were analyzed, and the analysis results were presented descriptively (Moleong, 2011).

Traditional Nias people, especially those living in rural areas, rely more on the surrounding plants as a source of food, vegetables, and medicine (Sutarjadi, 1992) and according to BSP (2006) Ornamental plants have aesthetic value in shape, leaf colour, crowns, and flowers often used to decorate yards. Medicinal plants are all cultivated and uncultivated plants that can be used as medicine, ranging from visible to visible under the microscope (Hamid et al., 1991). Medicinal plants are plants whose plant parts (leaves, stems, or roots) have medicinal properties and are used as raw materials to manufacture modern or traditional medicines (Suhirman, 1990). According to Soedibyo (1992), medicinal plants are one of the main ingredients of herbal/traditional medicinal products, drugs based on derivative experience is made from materials or blends of plant, animal or mineral materials that are not yet pure substances. Meanwhile, according to Zuhud and Haryanto (1994), medicinal plants are all species of medicinal plants that are known or believed to have medicinal properties.

Vegetable plants are one type of horticultural plant with a shorter lifespan to be used as staple crops. North Nias Regency, as one of 33 regencies in North Sumatra, is one of the relatively young regencies in North Sumatra; thus, there are quite a several sectors that need to be improved correctly and with quick steps in order to be able to follow other regencies in North Sumatra. As a new district, it cannot be denied that there are still many villages where people have low incomes, especially in remote areas that previously had not received attention from the local government. Although currently, North Nias Regency has a meager per capita income compared to other districts, for 2014, there were only two districts whose per capita income was below the per capita income of North Nias Regency, which means that North Nias is ranked 31st from the per capita income level for each regency in North Sumatra. The gardens on the island of Nias are extensive, as seen from many vacant lands. The vacant land can be said to be the remaining forest that the people have not cleared of North Nias, and the Gardens are a series of agricultural activities carried out to manage the land with certain plants grown in the area. Adapt to the appropriate ecosystem so that the management system is based on sound management, knowledge, technology and capital in order to be able to produce maximum results.

The definition of plantation according to experts, among others:

1. Law of the Republic of Indonesia Number 18 of 2004, Definition of plantation is land planted with certain plants that are cultivated on other growing media in accordance with the ecosystem, processing and marketing distribution of goods and plant products, capital and management in the realization of welfare for plantation cultivators.
2. Djafaruddin (1996), The definition of plantation is an annual crop or annual plant that is managed for the purpose of being a plantation crop grown on a large area of land. Seasonal plants are plants that can

produce yields only once in their life cycle (once a year) while annual plants need a long period of time to produce yields and can be harvested more than once. Based on the description above, it is considered very important to describe the vegetable lexicon that grows in the gardens of the Nias people, explain the basis for naming the vegetable lexicon, and reveal the vegetable lexicon metaphors used by the people of North Nias so that these lexicons are preserved and maintained.

II. METHOD

The type of research used by researcher is that this study uses a qualitative approach. This research aims to find out the essential agricultural, forestry and fisheries commodities in each North Nias Regency sub-district and understand the phenomena experienced by the research subjects. The phenomenon in question, behaviour, perception, motivation, action, etc., is holistic, presented descriptively in the form of words and language in a specific natural context. Data collection methods are observation and interviews. Researchers carried out observations to observe directly what lexicons were found in the field.

III. RESULTS AND DISCUSSION

3.1 Vegetable Lexicons in North Nias Community Plantations

1. *Bulugowirio*

In general, it is said to be a singkong leaf and in particular the northern dias is said to be bulu gowirio, and at the same time it is a vegetable lexicon. The cassava leaves which means the hairs on the cassava stems and the cassava stems are said to be filled and the contents are said to be si from the cassava stems and the contents can be used for daily needs.

- a) Good for pregnant women
- b) The high iron content in cassava leaves helps pregnant women to avoid anemia. As reported by the Health Benefit Times, cassava leaves contain high levels of folate and vitamin C.
- c) Help with fever and headache
- d) A decoction of cassava roots and leaves is said to help relieve fever and headaches. The trick: boil the roots and 400 grams of cassava leaves with one liter of water. Boil until the water reduces to half and then let it cool.
- e) Relieve diarrhea
- f) To get the benefits of cassava leaf decoction in treating diarrhea, you can boil seven cassava leaves with 4 cups of water until the remaining 2 cups. This liquid should be taken twice a day to cure diarrhea.
- g) Increase appetite
- h) Cassava leaves are said to help restore appetite. Concoction of cassava leaves with ginger should be drunk every morning after waking up.
- i) Help overcome stroke
- j) Studies that have been conducted by experts show that cassava leaves help treat stroke because cassava leaves have isoflavones, antioxidants that help bind free radicals.
- k) Increase endurance
- l) The high content of vitamin C helps increase endurance. Consumption of cassava leaves helps maintain the body by eliminating various diseases. Cassava leaves also help maintain bone health. Antioxidants help eradicate free radicals in the body. Folate helps increase cell production by helping genetic material for life and avoiding DNA mutations.
- m) Heal wounds

- n) The presence of various nutrients helps wounds heal quickly. With a little aloe vera gel, add some crushed cassava leaves and make a paste. This paste should be applied to the wound.



Internet Picture 1 Cassava Leaves
(North Nias language *Bulu gowirio*)
Internet Image Source

2. *Buasilimo*

Generally called kecombrang fruit and in the Nias language called *buah silimo*, this kecombrang fruit is a lexicon and a vegetable and can be used as traditional medicine. In the use of *buah Silom*, it is boiled, and the water is drunk; how to use in vegetables by pounding it evenly and ready to be mixed with vegetables to be cooked. Kecombrang, the scientific name *Etlingera Elatior*, has long been known by the Indonesian people as an ornamental plant, vegetable, and traditional medicine. Rhizomes, stems, leaves, fruits, flowers and essential oils are often used daily. Traditional use shows kecombrang is widely used as a flavour enhancer in cooking, food preservatives, treating wounds and earaches and removing body odor. Kecombrang is a large annual plant with large clumps of erect stems, leaves up to 6 meters high and flowering stems about 60 - 100 cm.

This plant is used locally as food and medicine. In addition, it is widely grown as an ornamental plant in the tropics mainly because of its attractive flower display. This plant prefers being in full sun or shade. It grows well in moist, fertile, but well-draining soil. All parts of the kecombrang plant are edible, including the rhizome, flowers, leaves, and fruit. Unopened shoots are sour, spicy and slightly sweet, with a mild floral and citrus flavour and sour fruit. Kecombrang is available year-round in tropical climates, with peak season in late spring to early summer. Kecombrang is a staple spice in Southeast Asia, especially in Malaysia. Kecombrang flower buds are versatile and favoured for their sour, spicy and floral taste.



Picture 2 Kecombrang
(Nort Nias Language *Buasilimo*)
Internet Source

3. *Buludawuo*

In general it is said to be betel leaf and specifically it is said in the Nias language, namely *Buludawuo*. *Lexico* is used as a traditional medicine in healing external wounds, and at the same time for users of this betel leaf or *Buludawuo* it can strengthen teeth for those who consume it.

Healthy Digestive Tract The first fact related to the benefits of betel leaf is that this leaf is able to nourish the digestive tract in the body. The content can increase metabolism, thereby stimulating the work of the

intestines to absorb nutrients and vitamins that are important for the body. In addition, betel leaf can also be used as herbal medicine to treat constipation. The boiled water is claimed to help smooth bowel movements. Betel leaf is an herbal plant that comes from the Piperaceae family. Since ancient times, the benefits of betel leaf have been used as a natural remedy to treat a number of health problems. Maintaining Oral and Dental Health. Another benefit of betel leaf is that it can maintain oral health and take care of teeth. The antimicrobial properties of betel leaf help to overcome the bacteria left in the mouth. Therefore, since the first betel leaf has been used to maintain teeth. Parents at that time used it by chewing betel leaves.

Antibacterial As an antiseptic and antibacterial, betel leaf can provide double protection from germs or bacteria attack. The reason, betel leaf is rich in polyphenols, especially chavicol. Betel leaf can be used as a medicine to relieve and accelerate wound healing. Not only that, betel leaf turns out to have antifungal properties and can help you fight fungal infections. **Prevent Cancer** Betel leaf contains many phytochemicals that can prevent cancer. In addition, the antioxidant eugenol in betel leaf can counteract free radicals. So, the benefits of betel leaf are very good for the health of the body. **Helping Wound Healing** In a previous study, a fact related to betel leaf states that the wound healing process can be accelerated by using the leaves. Even betel leaf extract has been shown to be effective in reducing oxidative stress which slows down wound healing. This is because betel leaf is a high source of antioxidants. Another benefit of betel leaf is to help heal burns. The polyphenol content will prevent bacterial infections, which will speed up the healing process. **Treating Nosebleeds** As a child you may have seen people who have nosebleeds, then their nose is stuffed by a piece of betel leaf. This method was found to be effective for dealing with nosebleeds. The antioxidant content of tannins in betel leaf can help accelerate wound healing. Therefore, do not be surprised if one of the benefits of betel leaf is to treat nosebleeds.



Picture 3 Betel Leaf
(Nias Language *Buludawuo*)
Internet Source

4. Buamakudu

The noni fruit is said in general and specifically in the northern Nias language as buamakudu, this buamakudu lives around the coast, this buamakudu lives in a tree whose trunk is a bit soft, and there are great benefits for those who consume this buamakudu by using the cooked buamakudu and drinking the water to reduce diabetes

1. Help overcome arthritis
 - a) a) Noni has been used as a traditional medicine for more than two thousand years to treat various diseases, one of which is arthritis.
 - b) Patients with arthritis often experience joint pain when the condition recurs. Noni juice is believed to relieve pain.
 - c) In a study published in 2011, giving noni juice daily to osteoarthritis patients managed to reduce the frequency and severity of pain. These results were achieved after drinking noni juice regularly for 90 days. Some of the study participants also claimed to experience improvements in quality of life.

2. Boost immunity

One more benefit of noni fruit for health is to increase the immune system. Because, this fruit is quite high in its vitamin C content. Vitamin C itself is known as one of the best intakes to support your immune system. Unfortunately, the human body cannot produce this vitamin on its own, so its intake must be obtained from other sources. This vitamin works by protecting your cells from damage from free radicals and environmental toxins. Thus, your risk of chronic disease is lower. The content of scopoletin present in noni fruit also has anti-bacterial, anti-inflammatory, antifungal and anti-histamine properties that enhance the body's defense mechanism.

3. Help lower cholesterol

You certainly already know that smoking is not a good habit. Not only bad for the health of your respiratory organs, smoking can also cause the body's cholesterol levels to increase. Consumption of noni juice might be one solution. Research team from the University of Illinois College of Medicine revealed that drinking noni juice for one month can reduce total cholesterol and LDL cholesterol levels in heavy smokers.

4. Lowering blood sugar

Animal studies have shown promising results on the benefits of noni fruit for controlling blood sugar levels. Researchers at the University of the West Indies conducted one such study. As a result, noni fruit has blood sugar-lowering properties. This study involved giving noni noni supplements or prescription diabetes drugs to diabetic rats for 20 days to study the effects of blood sugar. The study found that noni fruit is also effective as a diabetes drug in lowering blood sugar. The results were published in the journal Evidence-Based Complementary and Alternative Medicine in October 2010.

5. Help increase endurance during exercise

The benefits of this noni fruit are good news for those of you who like sports. This is most likely due to the antioxidant content in noni fruit which can reduce muscle tissue damage that usually occurs during exercise. In fact, a study has proven, giving noni juice twice a day for three weeks in runners managed to increase running performance by 21 percent.



*Picture 4 Noni Fruit
(North Nias Language Buamakudu)
Internet Source*

5. Busogambi mao

Basically it says in the picture below the cat's whiskers and specifically in the northern Nias language busogambi mao, this busigambi mao does not live arbitrarily and the tree trunk of this cat's whiskers is thin and the leaves are green and the cat's whiskers are white, many benefits that can be used especially for people who was poisoned. Cat whiskers are generally used as herbal remedies to fight bacterial infections, such as sores on the skin or swollen gums. Thanks to its antifungal and anti-inflammatory properties, there are many other benefits of cat whiskers, ranging from treating rheumatism and gout, kidney disease (especially kidney stones), as an allergy medicine, to stopping seizures. However, the main benefit of cat's whiskers and has been proven by a number of medical studies is as a urinary tract infection drug thanks to its diuretic effect. The benefits of cat whiskers have been reported by a study published in the journal Ethnopharmacology that conducted tests on several lab rats. The rats were given drinking water that had added cat's whiskers extract. The result was that in

the body, cat's whiskers extract worked to trigger an increase in urine production which made you urinate more often. Indirectly, back and forth urination can help flush bacteria that enter the bladder. It also helps reduce the chances of bacteria sticking to the cells in the walls of the urinary tract, which can lead to infection.



*Picture 5 Cat Whiskers
(Nort Nias Language Bulusogambi Mao)
Internet Source*

6. Bulugae

Globally in the picture below it is said to be a banana leaf, specifically in the northern Nias language it is called Bulugae, this banana lives everywhere and there are many types of banana trees, the trunk is called Tela in North Nias, banana leaves are called Bulugae North Nias and the fruit is called North Nias. as a buagae this buagae can be used as vegetables and food and the leaves can be used as a medicine for a sprained leg by using it smoked with live fire smoke and fried oil is obtained on the banana leaf and not all the banana leaves used, there are special bananas.

1. Treat colds and flu
2. Colds and flu are the most common diseases in the world. A study showed that medicinal plants, including the type of plantain, leaves such as banana leaves can be used as herbal medicine to fight the disease. Banana leaves have powerful antioxidants that can help treat this minor condition with home remedies.
3. Reduce fever
4. A study talks about the beneficial effects of all parts of the banana on fever, including the leaves. The phytochemicals in banana leaves can help prevent or treat conditions such as fever due to their antipyretic, antimicrobial, and anti-inflammatory effects. Drinking boiled banana leaves is considered healthy.
5. Alternative to wound dressings
6. According to a study, banana leaves are used as a cheap and effective wound dressing. The antimicrobial and anti-inflammatory properties of banana leaves are the same as gauze and petroleum jelly, so they can help heal wounds in less time.



Picture 5 Banana Leaf
(North Nias Language Bulugae)
Internet Source

6. Gundre

In the large Indonesian dictionary the picture below states turmeric and specifically in the language of the Nias Nias region, north of Gundre, this turmeric can live everywhere and this turmeric plant is small, about half a meter if it is large and the contents of this turmeric are very useful, it can be used for wound healing, and also used for vegetables.

One of the healing claims of turmeric is its anti-inflammatory properties. In the right dose, turmeric can be more effective than anti-inflammatory drugs such as ibuprofen and aspirin. Chronic inflammatory diseases that can be treated with turmeric include inflammatory bowel disease and arthritis such as osteoarthritis and rheumatoid arthritis. Osteoarthritis sufferers who consume turmeric at a dose of 1,000 mg per day will improve faster and reduce stiffness. The same is true for people with chronic rheumatoid arthritis. This disease attacks the joints but can spread to other areas such as the eyes, lungs, skin, heart, and blood vessels. By consuming 500 mg of curcumin and 50 mg of diclofenac sodium for 8 weeks, you will feel an improvement in the condition of the joints, namely feeling more flexible.



Picture 6 Turmeric
(North Nias Language Gundre)
Internet Source

1. Buluseremi

In the picture below it is generally said to be letupang leaf and Nias language is said to be Buluseremi, this ketupang leaf has many benefits that must be used such as fever and this leaf can live where;



Picture 7 Ketupang Leaf
(North Nias Language Buluseremi)
Internet Source

8. Bulu Malasiambu

Compounds in guava leaf tea help regulate blood sugar levels after meals, by inhibiting the absorption of two types of sugar, namely sucrose and maltose. Guava leaves help prevent complex carbohydrates from turning into sugar, promoting rapid weight loss. Guava leaves are high in vitamin C and iron, and a decoction of guava leaves is helpful in relieving coughs and colds as it helps remove mucus. Guava has high astringent properties, and guava leaves rank higher.



Picture 8 Guava Leaf
(North Nias Language Bulu Malasiambu)
Internet Source

IV. CONCLUSIONS

To find out basic agricultural, forestry and fisheries commodities in each sub-district in North Nias Regency and to understand the phenomena experienced by the research subjects. including trees or plants that have medicinal properties. As language is born from the interaction or relationship of the environment with the speaking community, it is also impossible for language to develop and survive if it is outside the environment or speech community. Thus, it can be said that the way a person creates a lexicon and builds his linguistic abilities can be directly illustrated from the experiences he gets from the environment that is recorded in his cognitive.

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