Ethnobotany of the Arecaceae family in Torgamba District, South Labuhanbatu, North Sumatra

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Abstract. Ethnobotany is a branch of science that studies the relationship between humans and plants. The arecaceae family is found in Indonesia and is widely used by people throughout the region. Study ethnobotany of the Arecaceae family in South Labuhanbatu Regency, North Sumatra aims to make an inventory of the types of arecaceae species commonly used by the community. The types of arecaceae species found in South Labuhanbatu include coconut (Cocos nucifera), Aren (Arenga pinnata), Palm Oil (Elais guineensis), Areca nut (Areca catechu), Red areca (Areca sp), Manau rattan (Calamus manan), King rattan (Calamus sp), Ornamental palm (Trachycarpus fortunei), Sikkut (Johannesteijsmania magnifica) and Palem palas payung (Licuana grandis). Of the 10 types of palms, almost all of them have multiple benefits. Its uses include food, building materials, medicine, household tools, ornamental plants for local social and cultural activities.

1. Introduction
Indonesia is one of the countries with the highest biodiversity in the world. One of the biodiversity possessed by Indonesia is the family of the Palem-palman (Arareceae). Arecaceae is a very diverse plant family with approximately 2600 species and 181 genera [1]. Palm is an interesting plant group, from the aspect of species diversity. Palm is generally a tree or shrub, varying in size from 25 cm to 60 m, and also varies in the shape of leaves, roots, inflorescences, fruit and seeds. Grow single or clumped, branched or not, pleonantic or hapaksantic [2].

Arecacea consists of five highly supported subfamilies: Arecoideae, Calamoideae, Coryphoideae, and Nypoideae and Calamoideae as the palema palm group [3]. Most of the palm trees are used for tools and utensils, construction and human food. The stems, leaves and fruit are the most widely used parts of the palm [1].

South Labuhanbatu Regency is a district with the majority of its people farming for oil palm. The community is very dependent on their life on the surrounding environment. Utilization of the Arecaceae family has long been carried out by the community, such as oil palm, coconut, rattan and sugar palm. Ethnobotany of this arecaceae family really needs to be documented to increase knowledge interviewers in the forestry sector. Almost all types of Araceceae are Non-Timber Forest Products.

Ethnobotany is a branch of science that studies the relationship between humans and plants. The practice of using plants to support the needs of the community has long been carried out by the
community, however, there has not been much documentation of this utilization. Therefore, this study aims to make an inventory of the types of palms used by the people of South Labuhanbatu in supporting their daily lives.

2. Materials and methods
The method used in this study is the snowball sampling method [4] in-depth interview techniques to key informants who are considered to know the benefits of various types of arecaceae family and plant parts used by the community. Key informants are parents, community leaders and farmers. After the data was obtained, it was analyzed descriptively.

3. Results and discussion
Based on the results of interviews with the people of Labuhanbatu Selatan, there are 10 types of palm families commonly used, including coconut (Cocos nucifera), Arenga (Arenga pinnata), Palm Oil (Elais guineensis), Pinang (Areca catecu), Red areca (Areca sp), Manau rattan (Calamus manan), King rattan (Calamus sp), Ornamental palm (Trachycarpus fortunei), Sikkut (Johannesteijsmania magnifica) and Palm palas payung (Licuana grandis).

Table 1. Type of Arecaceae utilized by the people of Torgamba District

| No. | Nama local | Scientific name | Utilization                      |
|-----|------------|----------------|---------------------------------|
| 1.  | Coconut    | *Cocos nucifera* | Food, Broom stick, material, medicine |
| 2.  | Aren       | *Arenga pinnata* | palm sugar, local alcohol       |
| 3.  | Palm oil   | *Elais guineensis* | Broom stick, palm sugar, fruit   |
| 4.  | Areca nut  | *Areca catecu* | Food, medicine                  |
| 5.  | Red Areca  | *Areca sp*      | Food, Ornamental plant          |
| 6.  | Manau rattan| *Calamus manan* | Food, rope                      |
| 7.  | King rattan| *Calamus sp*    | Food, rope                      |
| 8.  | Palen      | *Trachycarpus fortunei* | Ornamental plant           |
| 9.  | Sikkut     | *Johannesteijsmania magnifica* | Food               |
| 10. | Palm palas paying | *Licuana grandis* | Ornamental plant               |

Compared with of research [5] show that there are 10 species of Arecaaceae member plants in Seulimun Aceh District which are used by the community on a daily basis. The type of the Arecaaceae family that is most widely used is coconut. Several types of arecaceae family in South Labuhanbatu Regency in figure 1.

Coconut (*Cocos nucifera*) is one of the species most widely used daily, namely the fruit is used as coconut milk for food. Young coconut for an energy boost. The stick is usually used as a broom. The young leaves are usually for ketupat. The shells are usually made for rubber storage containers. The shell is also commonly used for talent ingredients. Coconut stems that are already tall are usually cut down to serve as bridges and local building materials. The tubers are used as vegetables when there is a celebration of the local community. In socio-cultural activities such as weddings, young leaves are also commonly used for traditional ceremonies in weddings. Coconut coir in Labusel Regency is usually used as coir for washing dishes. Coconut skin is also used as a medium for growing orchids for some people. Some people also use coconut processing such as coconut oil to take coconut oil and make it medicine. This type of green coconut is usually used for medicine.

Oil palm (*Elais guineensis*) is one of the plantation commodities in South Labuhanbatu Regency. Nearly 80 percent of the vegetation in this district is oil palm. The fruit is usually sold to factories by farmers. The lids were made into broom sticks and sold for 2,500 per kilogram to collectors.
Housewives usually do the activity of taking broom sticks after they finish doing homework. Some residents use oil palm fronds as chicken cages or as home fences. Some residents also use fronds as fuel. Part of the shoots of oil palms. Oil palms that are no longer productive are usually cut down and the water tapped to make brown sugar. Palm sugar brown sugar has a lower price below the market price of palm sugar. Palm oil mill waste is usually used as a growing medium for secondary crops.

Aren (*Arenga pinnata*)

Kelapa sawit (*Elais guinensis*)

Manau rattan (*Calamus manan*)

Red areca (sp *Areca*)

Palm palas payung (*Licuana grandis*)

Sikkut (*Johannesteijsmania*)

![Figure 1. Several types of Arecaceae family in South Labuhanbatu Regency](image)

The part that is used from sugar palm (*Arenga pinnata*) is generally sap water, where this juice can usually be consumed directly as a breast milk enhancer for nursing mothers. Sap water is also used as tuak (a local alcoholic drink). Sap water is more commonly used as an ingredient for making brown sugar. The fibers are usually used as a broom and as a binder. Research [6] in Cianjur, West Java that people also use palm trees to produce sugar.

Mannan rattan (*Calamus manan*) in Labusel Regency is usually used as the shoot, which is usually called pakkat as a typical food ingredient in Labusel Regency. The rattan shoots are usually processed by boiling and burning as a side dish for local residents. The rattan shoots have a bitter taste but are liked by the community. The old part of the trunk is usually used as a rope or tie. According to Henderson [3] prickly rattan, vines can be found throughout tropical forests of Africa and Asia. Its long, flexible trunk can be used as a stick, used for making furniture.

The Rattan King (*Calamus sp*) has a larger size than other rattan. Raja rattan is generally used mainly as a side dish of the people by boiling or burning. Another part that is used is the fruit with a sweet, sour and chelish taste. The trunk is usually used by residents as a binder.

Areca nut (*Areca catechu*) are usually used as a hedge plant both in yards and in gardens. Areca fruit is usually taken to eat. Apart from fruit, areca flowers are usually used as a ritual for bathing marpangir when welcoming the holy month of Ramadan. Areca flowers are usually boiled with other ingredients in the marpangir ritual. Some residents use areca nut as a strong medicine by juicing it or eating it directly. In social and cultural activities, betel nut is also used in traditional events.
Red Areca (Areca sp) is one of the ornamental plants used on the side of the road. This areca nut has a smaller size than ordinary areca. This Red arecanut bears fruit when the tree is still low. When flowering panicles, the flowers dangle to form a very beautiful plant, so this plant is suitable for planting on the side of the road or in the yard. The fruit when ripe is red and has a smaller size than ordinary betel nuts. The color of the fruit when ripe is bright red, making this betel nut beautiful.

Palem (Trachycarpus fortunei) is the ornamental palm found in Torgamba District. This palm is only used as an ornamental plant in front of the house.

Sikkut (Johannesteijsmania magnifica) is a type of understorey under the rubber tree. However, the existence of this sikkut is almost extinct due to the practice of spraying gardens with herbicides. Sikkut is usually used is the fruit. Fruit with a sweet taste, the sweet taste is even more pronounced if after eating sikkut fruit we immediately drink it. There are also residents who say that sikkut fruit is a medicinal plant. The wide leaves can be used as food wrappers.

Palam palas payung (Licuana grandis) or umbrella palm is a palm with round leaves with a diameter of about 60 cm. The leaf structure is rigid with a wavy surface that follows the folds of the leaf and looks like a fan. This type of Licuana grandis is used as an ornamental plant around the house.

4. Conclusions
There are ten species from the arecaceae family found in South Labuhanbatu which are used by the community in their daily life, including coconut (Cocos nucifera), Aren (Arenga pinnata), Palm Oil (Elais guineensis), Pinang (Areca catecu), Red areca (Areca sp), Rattan manau (Calamus manan), King rattan (Calamus sp), Ornamental palm (Trachycarpus fortunei), Sikkut (Johannesteijsmania magnifica) and palm palas payung (Licuana grandis). Some of these species grow wild in gardens and some are cultivated intensively such as oil palm.

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