



International Journal of Agriculture and Nutrition

ISSN Print: 2664-6064
 ISSN Online: 2664-6072
 Impact Factor: RJIF 5.2
 IJAN 2023; 5(1): 43-49
www.agriculturejournal.net
 Received: 02-11-2022
 Accepted: 07-12-2022

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Ethnobotany of the Kaili da'a community in Kinovaro district, Sigi reGENCY, central Sulawesi province

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DOI: <https://doi.org/10.33545/26646064.2023.v5.i1a.98>

Abstract

This study aimed to identify and explain the types and benefits of plants in the Kaili Da'a community. This research used a descriptive research type with qualitative and quantitative methods. The population in this study was the Kaili Da'a people in Balane Village, Kinovaro District, and Matantimali Village, Marawola Barat District, Sigi Regency. Qualitative methods were used to determine the use of known plants by the Kaili Da'a people in the Kinovaro and West Marawola Districts in the Sigi Regency. Plants were analyzed qualitatively by grouping plant species, including regional names, Latin names, families, habitus, parts used, and the benefits of these plants. The data obtained in the field was presented in tabulations and then analyzed descriptively with a quantitative approach using the Index of Cultural Significance (ICS) equation. The people of Balane village use 15 species of plants as food, 13 species of plants as spices, 19 species of medicinal plants, 9 species of plants as animal feed, 11 species of plants used for ritual and religious customs, 4 species of ornamental plants, 4 species of plants for 3 species of aromatic and dyes, 9 species of plants as fuel and 3 species of plants used as furniture and building materials. The parts of the plant used are leaves, fruit, tubers, stems, seeds, and flowers. The Kaili Da'a people's main food is Pae (*Oryza sativa* L.), a staple food, and additional food such as Punti and Jole (*Zea mays*). The highest percentage of plant used in medicines, namely 15.9% for food, it occupies the second highest at 12.6%. Meanwhile, plants are the lowest in dyes and aromatics, namely 2.5%. Based on this study, a high ICS value was obtained, namely, purpureum Roxb, and there were only 2 species of jeringau, Kaluku (*Cocos nucifera* L.) and Pae (*Oryza sativa* L.).

Keywords: Kaili Da'a community, plants, ethnobotany

Introduction

Indonesia is one of the countries known as "Mega biodiversity" countries, namely countries that have a wealth of biodiversity in the world ^[1, 2]. Besides that, it is also known as a country rich in cultural diversity ^[17]. Widjaja *et al.* (2014) state that Indonesia has the second highest biodiversity after Brazil for terrestrial flora and fauna and even the highest when combined with Indonesia's marine biodiversity ^[4]. This wealth must be utilized and managed optimally to provide benefits. Ismanto (2007) added that the wealth of biodiversity is one of the basic assets in implementing national development so that it can be used to improve people's welfare. However, the utilization must be in accordance with the ability (carrying capacity), characteristics, and function ^[5].

According to Purwanto *et al.* (2020), unfortunately, the high diversity in the archipelago is underappreciated, resulting in the loss of many of these cultures ^[17]. Studies to document and study traditional wisdom are urgently needed because traditional knowledge is often compatible with sustainable development goals, as discussed at the World Summit on Sustainable Development in Rio de Janeiro in 1992 and Johannesburg in 2002. Judging from its plant wealth, Indonesia has around 25,000-35,000 species of plants, half of which have the potential to be utilized for timber and fruit trees ^[15]. De Padua *et al.* (1999) describe thousands of plants that are useful as medicinal plants in Southeast Asia, including Indonesia ^[7]. Apart from that, plants are also a source of timber, edible fruits and nuts, spices and rigging, and others ^[18, 9, 10].

One of the indigenous peoples in Indonesia, especially in Central Sulawesi, who has long used plants for various daily needs is the Kaili Da'a tribe, who live in Kinovaro and West Marawola Districts, Sigi District, Central Sulawesi Province.

The Da'a tribe is an indigenous community of native people who live in the Sigi Regency. The tribe lives in forest and mountain areas. They live a nomadic life, moving from forest to forest while looking for places to open new fields. After the crops in the fields are harvested, they will look for new land again ^[16].

The people of the Kaili Da'a tribe who live in the area have a close relationship, a high sense of brotherhood between the village people who live very peacefully and peacefully and uphold the philosophy of "NOSAINDO NOSAUMA NOSABATUTU". Besides that, they have local knowledge systems in utilizing various plants used in everyday life, both as food ingredients, medicinal ingredients, buildings, traditional rituals, and industrial materials. However, information about this local knowledge system has never been documented, especially in ethnobotanical studies, so it is necessary to conduct research in this area. The habit of using plants to support their life is very interesting to study. The local wisdom of the Kaili Da'a people is also interesting to study. This is very valuable knowledge and is a cultural wealth that needs to be explored so that this traditional knowledge is not lost.

The researcher was encouraged to find out more by researching the Ethnobotany of the Kaili Da'a Community in Kinovaro and West Marawol Districts in Sigi Regency, Central Sulawesi. This study aimed to identify and explain the types and benefits of plants in the Kaili Da'a community.

Materials and Methods

This research used a descriptive research type with qualitative and quantitative methods. According to Martono (2010), descriptive research aims to describe the character of a variable that occurs in society through interview and observation techniques ^[12]. Qualitative methods were used to determine the use of known plants by the Kaili Da'a

people in the Kinavaro and West Marawola Districts in the Sigi Regency. Plants were analyzed qualitatively by grouping plant species, including regional names, Latin names, families, habitus, parts used, and the benefits of these plants. Meanwhile, by calculating the ICS value, the quantitative method was used to determine the level of knowledge, types of plants, and use of plants. The ICS calculation results showed the level of importance of each useful plant species by the community.

This research was conducted from May to June 2021 in Balane Village and Matantimali Village, Sigi District, Central Sulawesi Province. The population in this study was the Kaili Da'a people in Balane Village, Kinovaro District, and Matantimali Village, Marawola Barat District, Sigi Regency.

The selection of informants (respondents) was carried out by Snowball Sampling (13). Then the selection of key informants by setting the criteria, namely: Aged 15 - 60 years more, Have status and role in society, Have knowledge about the use of plants, Recognizes the entire terrain extensively. The tools used were stationery, books, the questionnaire, a camera to document research objects, the book Serie Flora Malesiana (Volumes 1-16), PROSEA Series (Plant Resources of Southeast Asia), Indonesian Useful Plants volumes 1-4 (Heyne, 1987), a list of Indonesian medicinal plants, the Atlas of Indonesian Medicinal Plants Volumes 1-6 and the Smart Book of Medicinal Plants to identify plant species, meter and label paper.

The data obtained in the field was presented in tabulations and then analyzed descriptively with a quantitative approach using the Index of Cultural Significance (ICS) equation.

Results and Discussion

Plants as Food Ingredients

Table 1: Plant species are valuable as food ingredients used by the people of Balane village

No	Scientific name	Indonesian name	Local name (Kaili Da'a)	Utilized part
1	<i>Oryza sativa</i> L.	Padi	Pae	Seed
2	<i>Zea mayz</i> L.	Jagung	Jole	Seed
3	<i>Moringa oleifera</i> Lam.	Kelor	Kelo	Leaves, flowers, and fruit
4	<i>Musa × paradisiaca</i>	Pisang	Punti	Leaves, flowers, and fruit
5	<i>Artocarpus communis</i> Forst.	Sukun	Kamonji	Fruit
6	<i>Mangifera Indica</i> L.	Mangga	Taipa	Fruit
7	<i>Cocos nucifera</i> L.	Kelapa	Kaluku	Fruit
8	<i>Annona squamosa</i> L.	Srikaya	Sirikaya	Fruit
9	<i>Carica papaya</i> L.	Pepaya	Gampaya	Fruits, flowers, and leaves
10	<i>Psidium guajava</i> L.	Jambu Biji	Jambu Biji	Fruit and leaves
11	<i>Persea americana</i> P. Mill.	Alpukat	Alpukat	Fruit
12	<i>Muntingia calabura</i> L.	Karsen	Karsen	Fruit
13	<i>Annona muricata</i> L.	Sirsak	Sirsak	Fruit and leaves
14	<i>Ipomoea aquatica</i> Forssk.	Kangkung	Kangkung	Leaves and stems
15	<i>Cleome gynandra</i> L.	Kumis Kucing	Bavoa	Leaves and stems

Plants as food ingredients aside from forests also come from gardens and fields owned by the community. The parts of the plant used are leaves, fruit, tubers, stems, seeds, and flowers. The main food of the Kaili Da'a people is what is called Pae (*Oryza sativa* L.), which is the staple food, and

additional food such as Punti (*Musa paradisiaca* L.) and Jole (*Zea mayz* L.).

Plants as Spices

Table 2: Species of plants as spices used by the people of Balane village

No	Scientific Name	Indonesian Name	Local Name (Kaili Da'a)	Utilized part
1	<i>Tamarindus indica L.</i>	Asam Jawa	Poi	Fruit and Stems
2	<i>Zingiber officinale Roscoe</i>	Jahe	Jahe/Kula	rhizome
3	<i>Curcuma longa L.</i>	Kunyit	Kuni	rhizome
4	<i>Cymbopogon citratus (DC.) Stapf</i>	Serai / sereh	tumbavani	Stem
5	<i>Pandanus amaryllifolius</i>	Pandan	Pandan	Leaf
6	<i>Allium sativum L.</i>	Bawang Putih	Pia Bula	tubers
7	<i>Allium ascalonicum L.</i>	Bawang Merah	Pia Lei	tubers
8	<i>Piper nigrum L.</i>	Lada	Marisa jawa	Seed
9	<i>Citrus aurantifolia (Cristm) Swingle.</i>	Jeruk Nipis	Lemo Barangi	Fruit and leaves
10	<i>Momordica charantia L.</i>	Pare	Paria	Leaves and Fruit
11	<i>Solanum lycopersicum L.</i>	Tomat	Paran Cina	Fruit
12	<i>Alpinia galanga (L.) Willd.</i>	Lengkuas	Lengkuas	rhizome
13	<i>Citrus Maxima</i>	Lemon Bali	Lemo Bali	Fruit and Leaves

The people of Balane village use several plants as spices for daily use, such as cooking. Various plant species are often used because of the value of the ingredients, such as taste, culture, and ease of obtaining these plants.

There are 13 types of plants that are usually used by the people of Balane Village as spices, consisting of fruits, tubers, stems and seeds. Fruit parts that are usually used in cooking are Poi sambalagi (*Tamarindus indica L.*), Lemo baranga (*Citrus aurantifolia (Cristm) swingle.*), Lemo Bali (*Citrus maxima*), Marisa (*Capsicum frutescens L.*), Tumbavani (*Cymbopogon citratus (DC)) Stapf*, Parancina

(*Solanum lycopersicum L.*) Galangal (*Alpinia galanga (L.) Willd.*) and Lemo njusu (*Citrus hytrix Dc.*). Plants whose tubers are used as spices are Kuni (*Curcuma longa L.*), Pia (*Allium cepa L.*) Pia Lei (*Allium ascalonicum L.*) Pia Bula (*Allium sativum L.*) and Goraka (*Zingiber officinale Roxb.*), seeds are Marisa jawa (*Piper ningrum L.*).

Plants as medicine

Based on the interview results, the people in Balane village still often use plants as medicine. These plants are presented in detail in Table 3.

Table 3: Plant species as medicine used by the people of Balane village

No	Scientific Name	Indonesian Name	Local Name (Kaili Da'a)	Utilized part
1	<i>Leucaena leucocephala</i>	Lamtoro	Lamtoro	Fruit
2	<i>Lannea Coromandelica</i>	Kayu Jawa	Kayu Jawa	Leaf
3	<i>Moringa oleifera Lam.</i>	Kelor	Kelo	Leaves and fruit
4	<i>Zea mayz L.</i>	Jagung	Jole	Seed
5	<i>Musa × paradisiaca</i>	Pisang	Loka/Puti	Leaves, flowers and fruit
6	<i>Chromolaena odorata (L.) R.M.King & H.Rob.</i>	Tumbuhan Kirinyu	Katumbora Betina	Sap Leaves
7	<i>Acalypha indica L.</i>	Kucing Galak	Akar Taveve	Leaves, Stems
8	<i>Curcuma Longa</i>	Kunyit	Kuni	rhizome
9	<i>Allium sativum L.</i>	Bawang Putih	Pia Bula	tubers
10	<i>Allium ascolanicum</i>	Bawang Merah	Pia Lei	tubers
11	<i>Andrographis paniculata</i>	Sambiloto	Sambiloto	Leaf
12	<i>Laportea ducumana</i>	Katilalo Daun	Katilalo Daun	Leaf
13	<i>Psidium guajava L.</i>	Jambu biji	Jambu biji	Fruit, leaves
14	<i>Plectranthus</i>	Mayana	Mayana	Leaf
15	<i>Annona squamosa</i>	Srikaya	Srikaya	Leaves, Fruit
16	<i>Morinda citrifolia</i>	Mengkudu	Mengkudu	Fruit
17	<i>Punica granatum L.</i>	Delima	Delima	Fruit
18	<i>Muntingnia calabura L.</i>	Kersen	Kersen	Fruit
19	<i>Cardiospermum</i>	Paria gunung	Pepogu	Fruit

Based on interviews with people in Balane village, people still use plants as medicine, with several diseases that can be cured. Medicine for diabetes (to reduce blood sugar levels) is Java wood and Lamtoro (*Leucaena leucocephala*), the shaved stems are attached / wrapped around the wound caused by the disease, 7 leaves are boiled with 3 glasses of water until the water shrinks to 1 glass and the water is drunk. Lumbago medicine, namely the roots of panuntu (*Phyllanthus niruri L.*) and cat root (*Acalypha indica L.*) are cleaned then the roots are boiled with 3 cups of water until they shrink to 1 cup of water and drunk, lelupa root (*Urena lobata L.*) is cleaned then the roots are boiled with 3 cups of water until they shrink to 1 cup of water and drunk, lelupa root (*Urena lobata L.*) roots are cleaned then the roots are boiled with 3 cups of water until reduced to 1 cup of water

and drunk, mantalalu (*Euphorbia hirta L.*) roots are cleaned then the roots are boiled with 3 cups of water until reduced to 1 cup of water and drunk, cat whiskers (*Orthosiphon stamineus Benth.*) the leaves are cleaned and boiled with 3 glasses of water until it shrinks to 1 glass of water and then drunk, lemo baranga (*Citrus aurantifolia (Cristm) swingle.*) is orange juice mixed with warm water and sugar then drunk and Keji beling (*Strobilanthes crispus Bl.*) is the top of the leaves boiled and the water is drunk. Wound medicine is Java wood (*Lannea grandis Eng L.*) the leaves are mashed and wrapped around the wound, sambara oli (*Lantana camara L.*) the leaves are kneaded and the water is dripped on the wound, kolontigi (*Lawsonia inermis L.*) the leaves are pounded and wrapped around the injured toe, natural

betadin (*Jatropha multifida* L.) and katilalo (*Jatropha curcas* L.) the sap is dripped on the wound.

Asthma medicine is kelo (*Moringa oleifera* Lam.) the leaves are squeezed and rubbed on the body of people suffering from asthma, the treatment is carried out until the patient feels better.

Blood-lowering medicine, namely Dutch sirikaya (*Annona muricata* L.), the leaves in the center of 7 sheets are boiled with 3 cups of water until it shrinks to 1 glass of water and then boiled until the leaves are dried. panda (*Pandanus amaryllifolius* Roxb.) the leaves are finely ground, and the water is drunk, sanggulera (*Averrhoa bilimbi* L.) the leaves are cleaned and poured with warm water after that the water is drunk and tolasi (*Ocinum basilicum* L.) the leaves are boiled with 3 cups of water until it shrinks to 1 glass and drunk. Eye pain medicine is "kelo" (*Moringa oleifera* Lam.) the leaves are kneaded and the water that comes out of the leaf juice is dripped on the eyes, Java wood (*Lannea grandis* Eng L.), namely the fresh sap is dripped on balaroa (*Hibiscus tiliaceus* L.) the treatment is the same as the treatment using kelo leaves (*Moringa oleifera* Lam.), namely the leaves are kneaded and the water that comes out of the leaf juice is dripped on the eyes and eyes.

The appetite enhancer is tambilawa (*Curcuma xanthorrhiza* Roxb.), namely the tubers are cleaned and then grated and

the water can be drunk directly or can also be added with warm water and Kuni bula (*Curcuma mango* L.), which is the same way of processing as when processing tambilawa (*Curcuma xanthorrhiza* Roxb.). Toothache medicine is silaguri (*Sida rhombifolia* L.), the roots are cleaned and mashed then inserted into the cavities and sambara oli (*Lantana camara* L.), the leaves are kneaded and the water is dripped on the cavities and toe (*Diospiros celebica* Bakh.). Diarrhea medicine is guava (*Psidium guajava* L.) leaf shoots directly bitten, and guava sera (*Anacardium occidentale* L.) leaf shoots and katilalo (*Jatropha curcas* L.) are mixed and poured with warm water and then drunk. Stomach pain medicine is kariango (*Acorus calamus* L.), where the tuber is cleaned and smoked. Medicine for leucorrhoea is bolu (*Piper betle* L.) and Java wood (*Lannea grandis* Eng L.).

Plants as Animal Feed

Some of the people in Balane village still have cattle, and based on interviews, several plants are used as fodder for livestock. The following are the livestock-producing plants used by the people in Balane Village, as presented in Table 4. Of the several plants, banana stems are the most widely used and most preferred by breeders as animal feed because they are easy to obtain.

Table 4: Plant species as animal feed in the Balane village community

No	Scientific Name	Indonesian Name	Local Name (Kaili Da'a)	Utilized part
1	<i>Acacia auriculiformis</i> Benth	Akasia	Akasia	Wood and Stem
2	<i>Leucaena leucocephala</i>	Tamalanja	Tamalanja	Wood, Stem, Fruit
3	<i>Lannea coromandelica</i> (Houtt.) Merr.	Kayu Jawa	Kayu Jawa	Leaves and stems
4	<i>Oryza sativa</i> L.	Padi	Pae	Seed
5	<i>Musa × paradisiaca</i>	Pisang	Loka/Puti	Leaves, flowers, stems, and fruit
6	<i>Gliricidia sepium</i> (Jacq.) Walp.	Gamal	Gamal	Stems and Leaves
7	<i>Amarantus spinosus</i>	Bayam Duri	Bayam Duri	Leaves and Stems
8	<i>Ipomoea aquatica</i> Forssk.	Kangkung	Kangkung	Leaves and Stems
9	<i>Nephelium lappaceum</i> L.	Tali Hutan	Tali Hutan	Stem

Based on interviews with the community in Balane village, most of them are farmers, but there are also some people who also raise livestock. Animals raised in Balane village are japi (*Bostaurus*), beke (*Capra aegagrus hircus*), and manu (*Gallus gallus domesticus*).

The plant species commonly used as animal feed are punti (*Musa paradisiaca* L.), jole (*Zea mays* L.), tanggo and (*Ipomea aquatica* Forsk.) These plants are commonly used by the community as ingredients for their animal feed

because they are easily available.

Plants are used for customary, ritual and religious purposes

Even though the people in Balane Village look modern, they still carry out traditions and rituals that their ancestors usually carried out. Several plant species are commonly used by the people of Binangga village in traditional and religious ceremonies, as presented in Table 5.

Table 5: Plant species as customs, rituals and religion in the people of Balane Village

No	Scientific Name	Indonesian Name	Local Name (Kaili Da'a)	Utilized part
1	<i>Cocos nucifera</i> L.	Kelapa	Kaluku	Fruit and leaves
2	<i>Curcuma longa</i> L.	Kunyit	Kuni	Tubers
3	<i>Musa paradisiaca</i> L.	Pisang	Loka	Fruit
4	<i>Eleusine indica</i>	Rumput Belulang	Pada	Leaf
5	<i>Cocos macivera</i> L.	Kelapa	Kaluku	Whole
6	<i>Sida rhombifolia</i> L.	Sidaguri	Sidaguri	Whole
7	<i>Kalanchoe pinata</i> L.	Cocor Bebek	Siranindi	Whole
8	<i>Lawsonia inermis</i> L.	Pacar Kuku	Kolontigi	Leaf
9	<i>Arthocarpus communis</i> Forst.	Sukun	Kamonji	Leaf
10	<i>Oryza sativa</i> L.	Padi	Pae	Whole
11	<i>Acorus calamus</i> L.	Jeringau	Kariango	Stem

Traditional rituals for the people of Balane village are still practiced, namely Balia, which aims to treat sick people. Community knowledge about traditional rituals is also very

high because these plants are easy to obtain in yards, gardens, and the forest. The people in Balane village although somewhat modern, but still carry out traditions and

rituals that are usually carried out by their ancestors. The customary rituals of the Balane village community that are still carried out are wedding customs, house construction, Povunja (harvest), Posuna (circumcision) hair cutting, Polama (7 monthly events) and Balia ceremonies aimed at treating sick people. The community's knowledge of plants used in traditional rituals is also still very high because these plants are easily available in yards, gardens and forests. Some of the plants used by the community are kaluku (*Cocos nucifera* L.), kuni (*Curcuma longa* L.), punti (*Musa*

paradisica L), siranindi (*Kalanchoe pinata* L.), Kolontigi (*Lawsonia inermis* L) and kamonji (*Arthocarpus communis* Forst) and pae (*Oryza sativa* L.).

Ornamental Plants

Ornamental plants the people know of the Kaili Da'a tribe in Balane village; there are several species. However, only a few people grow ornamental plants in their yards. Plants used as ornamental plants as presented in Table 6.

Table 6: Plant species are useful as decoration for the people of Balane Village

No	Scientific Name	Indonesian Name Indonesia	Local Name (Kaili Da'a)
1	<i>Streblus asper</i>	Pohon Serut	Pakora
2	<i>Cosmos caudatus</i>	Kenikir	Bunga Tai Manu
3	<i>Polyalthia longifolia</i>	Gelodokan	Gelodokan
4	<i>Bougainvillea spectabilis</i>	Bunga Kertas	Flamboya

The people of Balane village also planted some ornamental plants in front of the house but still only some people planted ornamental plants, because some of them used their yard to grow vegetables. Some plant species that are often found in people's yards are Pakora (*Streblus asper*), Tai Manu flower (*Cosmos caudatus*), Gelodokan (*Polyslthia longifolia*), Flamboya (*Bougenvilla spectatilis*).

Plants as dyes and aromatics

The Kaili Tribe community in Balane village has sufficient knowledge about plants commonly used as dyes and aromatics. This can be seen in the plants used for food coloring and aromatics. The commonly used plants are listed in Table 7.

Table 7: Plant species are useful as dyes and aromatics for the people of Balane village

No	Scientific Name	Indonesian Name	Local Name (Kaili Da'a)	Utilized Part
1	<i>Pandarrus amaryllifolius</i> Roxb	Pandan	Pondan	Leaf
2	<i>Curcuma longa</i> L	Kunyit	Kuni	Tubers
3	<i>Lawsonia inermis</i> L	Pacar Kuku	Kolontigi	Leaf

Aromatic plants can also be called essential oil-producing plants. Essential oils are extracted or distilled from the leaves, roots, stems, bark, sap, and flowers of plants ^[13] in ^[14]. Plants that produce essential oils have characteristic odors and aromas because the functions of essential oils that are most extensive and most commonly in demand are as fragrances, be it perfumes, cosmetics, room fresheners, soap fragrances, toothpaste, flavoring in food, and other household products ^[14].

Plants used for Fuel: Firewood is a very important material for the people of Balane village because the local people use firewood for their daily activities, such as cooking. It is also easy to be gathered in the forest or even in the garden. Many species of wood can be used as firewood, but only a few species have the potential to be used as fuelwood; they have a good flame, are durable, and gives enough coals. Several plant species commonly used by the community for firewood are presented in Table 8.

Table 8: Plant species are valuable as Fuel in the Balane village community

No	Scientific Name	Indonesian Name	Local Name (Kaili Da'a)	Utilized part
1	<i>Cocos nucifera</i> L.	Kelapa	Kaluku	Stems, shells, husks and fronds
2	<i>Mangifera indica</i> L.	Mangga	Taipa	Stems and Twigs
3	<i>Artocarpus heterophyllus</i> Lam	Nangka	Nangka	Stems and Twigs
4	<i>Psidium guajava</i> L.	Jambu	Jambu	Stems and Twigs
5	<i>Tamarandus indica</i> L.	Asam Jawa	Poi	Stems and Twigs
6	<i>Citrus aurantifolia</i> (Cristm) swing	Jeruk Nipis	Lemo baranga	Stems and Twigs
7	<i>Acacia nilotica</i>	Akasia Berduri	Karui	Stems and Twigs
8	<i>Muntingia calabura</i> L.	Kersen	Kersen	Stems and Twigs
9	<i>Cassia florida</i> VahL	Johar	Johar	Stems and Twigs

Most people in Balane village still use wood stoves and charcoal for cooking, although some people use stoves for cooking. Villagers usually collect these fuels in the garden or forest. Plant species commonly used are kaluku (*Cocos nucifera* L.), Taipa (*Mangifera indica* L.), Nangka (*Artocarpus heterophyllus* Lam), Jambu (*Psidium guajava* L.), Poi (*Tamarandus indica* L.), Lemo baranga (*Citrus aurantifolia* (Cristm) swing), Karui (*Acacia nilotica*), Kersen (*Muntingia calabura* L.), Johar (*Cassia florida* Vah L). Of all these plants, the parts used are stems and twigs, while

kaluku (*Cocos nucifera* L.) parts used are shells, stems, belts and midribs.

Plants Producing Building Materials, Furniture and Crafts:

The people in Balane village also still use plants to make both buildings for houses and furniture. The part that is often used as building materials and furniture is a log. In general, the part of the log is used as material for poles, roof trusses, and doors. The types of plants that are often used are listed in Table 9.

Table 9: Plant species are valuable as building materials, furniture and handicrafts for the people of Balane village

No	Scientific Name	Indonesian Name	Local Name (Kaili Da'a)	Utility	Utilized Part
1	<i>Cocos nucifera</i> L.	Kelapa	Kaluku	House wall	Stem
2	<i>Oryza sativa</i> L.	Padi	Pae	High roof	Leaf
3	<i>Ceiba petandra</i> L.	Kapuk Randu	Kakafu	For doll and pillow crafts	Fruit fiber
4	<i>Acacia</i>	Akasia	Akasia	House Building	Wood, Stem
5	<i>Tectona grandis</i> L.F.	Jati	Jati	House Building	Wood, Stem

Plants can be used both in making buildings for houses and for furniture such as cabinets, chairs and tables. The types of plants commonly used as materials for buildings, such as the walls of houses, usually use hard stems from kaluku (*Cocos nucifera* L.), and teak (*Tectona grandis* L.f.). In addition, kaluku (*Cocos nucifera* L.), and teak (*Tectona grandis* L.f.) can also be used as the floor of a tall house. There are also plants whose fiber parts (Kapok) are used as crafts as material for pillows and children's toy dolls, namely Kakafu (*Ceiba petandra* L.).

Culture Significance Index (ICS) Value

From the calculation of the ICS value for each plant used by the Kaili DA'A community, the results can be seen in Table 10.

Table 10: Cultural Significance Index (ICS) Value

Index Culture Significance (ICS)	Total
High (50 - 99)	2
Moderate (20 - 49)	34
Low (5 -19)	64
Very Low (1- 4)	10

Based on interviews with respondents, the high ICS value is that there are only species namely Kaluku (*Cocos nucifera* L.) and Pae (*Oryza sativa* L.).

Kaluku (*Cocos nucifera* L.) has the highest ICS value because coconut is a plant that has many uses, and plants with very low ICS values are 10 species, namely Rhoeo diskolar (*Tradescantia spathacea* Sw. syn. *Rhoeo discolor* (L'Hér.) Hance), Keladi Jala (*Scindapsus pictus* Hassk.), Mangkokan (*Polyscias scutellaria* (Burm.f.) Fosberg syn. *Nothopanax scutellarius* (Burm.f.) Merr.), Sakulaku (*Theobroma cacao* L.), Cleroden pariculatum (*Clerodendrum paniculatum* L.), Flamboyant (*Bougainvillea spectabilis* Willd.), *Impatiens balsamina* (*Impatiens balsamina* L.), Daffodils (*Crinum asiaticum* L.), Occinum sp, Alang-alang (*Imperata cylindrica* (L.) Raeusch).

Conclusion

The number of plant species utilized by the people of Balane village is around 119 species and 61 families. The people of Balane village use 15 species of plants as food, 13 species of plants as spices, 19 species of medicinal plants, 9 species of plants as animal feed, 11 species of plants used for ritual and religious customs, 4 species of ornamental plants, 4 species of plants for 3 species of aromatic and dyes, 9 species of plants as fuel and 3 species of plants used as furniture and building materials.

The parts of the plant used are leaves, fruit, tubers, stems, seeds, and flowers. The Kaili Da'a people's main food is Pae (*Oryza sativa* L.), a staple food, and additional food such as Punt and Jole (*Zea mays*). The highest percentage of plant used in medicines, namely 15.9% for food, it occupies the second highest at 12.6%. Meanwhile, plants are the lowest in dyes and aromatics, namely 2.5%.

A high ICS value was obtained, namely, purpureum Roxb, and there were only 2 species of jeringau, Kaluku (*Cocos nucifera* L.) and Pae (*Oryza sativa* L.). About 10 species of plants with very low ICS values, including Kaluku (*Cocos nucifera* L.) and Pae (*Oryza sativa* L.). Kaluku (*Cocos nucifera* L.) has the highest ICS value because coconut is a plant with many uses, and 10 species of plants with very low ICS values are Rhoeo discolor (*Tradescantia spathacea* Sw. syn. *Rhoeo discolor* (L'Hér.) Hance), Jala Jala (*Scindapsus pictus* Hassk.), Mangkokan (*Polyscias scutellaria* (Burm.f.) Fosberg syn. *Nothopanax scutellarius* (Burm.f.) Merr.), Sakulaku (*Theobroma cacao* L.), Cleroden Pariculatum (*Clerodendrum paniculatum* L.), Flamboyant (*Bougainvillea spectabilis* Willd.), *Impatiens Balsamina* (*Impatiens balsamina* L.), Daffodils (*Crinum asiaticum* L.), Occinum sp. (*Occinum* sp.), Imperata (*Imperata cylindrica* (L.) Raeusch.)

Acknowledgments

Thanks to The Kaili Da'a Community In Kinovaro District, Sigi Regency, Central Sulawesi Province for their assistance during data collection and data analysis.

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