Jurnal Review Pendidikan dan Pengajaran
http://journal.universitaspahlawan.ac.id/index.php/jrpp
Volume 7 Nomor 4, 2024
P-2655-710X e-ISSN 2655-6022

Submitted : 29/11/2024
Reviewed : 01/12/2024
Accepted : 02/12/2024
Published : 06/12/2024

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BIODIVERSITY OF HOME GARDEN EDIBLE PLANTS IN TEPUS, BLIMBING, AND SUMBEREJO, SEWUREJO VILLAGE, MOJOGEDANG, KARANGANYAR, CENTRAL JAVA

Abstract
Indonesia has various types of flora and fauna spread throughout its territory. This great potential can also be seen from the diversity of edible plants that thrive in various regions. This biodiversity plays an important role in supporting food security, health, and ecosystem sustainability. This study aims to determine the biodiversity of edible plants in home yards in Tepus, Blimbing, and Sumberejo Hamlets, Sewurejo Village, which is important to know the local potential in supporting food security and preserving the biodiversity of the region. The research method used is a qualitative method with community interviews as the primary data source used and analyzed using the Use Value (UV) formula, Relative frequency of citation (RFC), and Index of Cultural Significance (ICS). The results of the study found 50 species from 27 families. The most common plants came from the Fabaceae family, such as Parkia speciosa Hassk., Vigna unguiculata (L.) Walp, and Archidendron pauciflorum and others. The highest UV value was obtained by Cocos nucifera L. species, which was 0.038. The highest RCF value is Mangifera indica L. (0.305). And Cocos nucifera L. and Manihot esculenta Crantz plants have the highest value on the ICS index (42).
Keywords: Edible Plants, Use Value (UV), Relative Frequency Of Citation (RFC), Index Of Cultural Significance (ICS).

INTRODUCTION

Indonesia is known as one of the countries with the largest biodiversity in the world. As a tropical country, Indonesia has various types of flora and fauna spread throughout its territory (Isti'anah, 2021). With a stable and diverse climate, Indonesia has more than 300,000 plant species, including various food crop species that support people's lives (Ikhsan et al. 2024). This great potential can also be seen in the diversity of food plants that thrive in various regions, including in home yards. According to Noor (2023), this biodiversity plays an important role in supporting food security, health and ecosystem sustainability.

Sewurejo Village, located in Mojogedang Sub-district, Karanganyar Regency, is one of the areas with high food crop biodiversity. With an altitude between 400 to 500 metres above sea level. According to Soussi et al (2022) the existence of cool temperatures and sufficient humidity allows the growth of local food crops such as vegetables, tubers, and fruits. The diversity of food plants in the yards of Sewurejo residents provides significant benefits, both as a source of food, traditional medicines, and household economic needs (Muhammadun et al. 2021).

Food plants in home yards can be utilised for various purposes (Kurniati et al. 2022). Most of the plants are used for family consumption, thus reducing dependence on food purchased at the market (Osawaru and Ogwu, 2020). In addition, some plants are also sold to supplement family income (Nurhab, 2023). In Sewurejo Village, home yards are not just empty spaces, but productive lands that support the sustainability of community life.

However, the environmental characteristics in Sewurejo Village are not uniform. The three neighbourhoods in the village, Tepus, Blimbing and Sumberejo, have different geographical and social conditions that affect the diversity of food crops grown in home gardens. Tepus Hamlet is

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an area that tends to be more urbanised because it is close to the main road. Much of the land in Tepus has been turned into built-up land, with houses close together. Home yards in this area are relatively narrow, and many have been concreted over, so space for growing food crops is very limited. Nevertheless, some residents still try to utilize potted plants or small spaces that are left to grow vegetables or herbs.

In Blimbing Hamlet, which is a border area between urban and rural areas, the environmental conditions are more varied. Although there are already a number of neighbouring houses, many yards still have enough space to grow food crops. Some yards in Blimbing are also still dirt, although some have been partially concreted. This area reflects a mix of urban and rural lifestyles, where the tradition of growing food in yards is still quite strong.

Unlike the previous two areas, Sumberejo Hamlet is a rural area far from the main road. Houses in this area are generally separated by gardens or farmland, with large yards of land. This condition allows residents to grow various types of food crops, both for their own consumption and for sale. The plants found in Sumberejo are very diverse, including vegetables, fruits, and herbs, which grow well in the house yards.

The differences in environmental characteristics between Tepus, Blimbing and Sumberejo hamlets provide an interesting picture of how geographical and social conditions affect biodiversity in home gardens, especially local food crops (Korpelainen, 2023). A study by Mazid et al (2022) at Karangsari Research Station in Mount Ciremai National Park found 29 species of food plants with the highest diversity index in harendong (Melastoma candidum) and coffee (Coffea). Thus, this study aims to determine the biodiversity of food plants in home yards in Tepus, Blimbing, and Sumberejo hamlets in Sewurejo Village, which is important for understanding local potential in supporting food security and preserving the biodiversity of the region.

METHOD

Study area

This research was conducted in Dusun Blimbing, Tepus, and Sumberejo, located in Sewurejo Village, Mojogedang Subdistrict, Karanganyar Regency, Central Java, Indonesia. The research was carried out in November 2024. Sewurejo Village is situated at coordinates 7.5156°S latitude and 110.8064°E longitude. Karanganyar Regency, known for its mountainous terrain and agricultural landscape, was chosen as the research location due to its strong agricultural activities, particularly food crop cultivation, which aligns with the focus of this study.

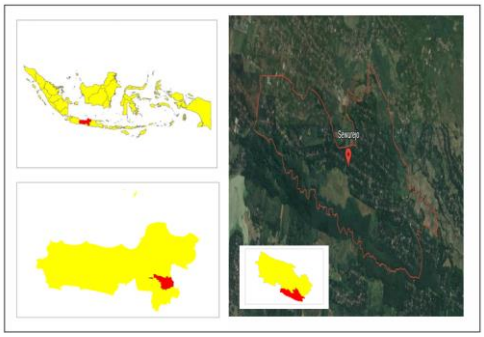

Figure 1. Map of Sewurejo Village, Mojogedang, Karanganyar Regency, Central Java, Indonesia

Data Collection

The method used in this study is a qualitative method. The type of descriptive qualitative research is a research approach that has systematic, planned, and clearly structured specifications from the beginning to the stage of developing the research design. The data collection technique used in this study included interviews as the primary data source. The interviews were conducted with informants consisting of farmers, housewives, and traders, particularly food crop traders. Additionally, secondary data were obtained through literature studies from relevant research sources, journals, and books. The sampling method used was purposive sampling, with specific criteria to determine the respondents to be interviewed. These criteria included individuals with knowledge of food crops and those who use food crops as food ingredients.

Data analysis

Relative frequency of citations (RFC)

Relative frequency of citation (RFC) is used to analyze ethnobotany. It is calculated by dividing the frequency of citation (FC) of a species by the total number of informants (N) participating in the survey. A higher RFC value signifies a greater perceived importance of the species within the community (Ralte et al. 2024).

RFC = FC/N

(0<RFC<1)

RFC: Relative frequency of citation

FC: the number of informants mentioning the use of the species

N : total number of informants participating in the survey

Use value (UV)

Utility value (UV) indicates the relative importance of the use of plant species. Through the calculation of UV, researchers can identify which plants are most significant to the local community, illustrating their dependence on particular species for food and daily necessities. This value is calculated using the following formula (Arbain & Pangestu, 2022):

UV = U/n

UV : Use value

U : the number of benefits recorded

n : The informant who mentioned the species.

Index of Cultural Significance (ICS)

It is a calculation of the important value of culture in a plant species. ICS can be calculated using the following formula (Wirabumi et al, 2022):

$ICS = \sum_1^n (\text{q x i x e}) n_i ICS = \sum_1^n (\text{q x i x e}) n_i$

q : quality value

e : exclusivity value

n : indicates the nth utilization

RESULT AND DISCUSSION

This study involved 105 respondents from three villages: Blimbing, Tepus, and Sumberejo. The majority of respondents were women, comprising 81 individuals (77.1%), while men accounted for 24 individuals (22.9%). This highlights the prominent role of women in the economic and social activities of the community. Occupation-wise, most individuals were farmers (49.5%), followed by homemakers (38.1%) and traders (12.4%), indicating the dominance of agriculture and domestic responsibilities as primary livelihoods. The age distribution shows a middle-aged majority, with the largest group aged 46–55 years (41.9%), followed by younger age groups, 36–45 years (21.9%), aged above 55 years (20.0%), and 26–35 years (16.2%), were less represented, suggesting a mature working population. In terms of education, the majority had only completed elementary school (44.76%), while 28.57% had no formal education, reflecting limited access to educational opportunities in the region. A smaller portion had completed junior high school (17.1%) and senior high school (7.6%), and only 1.9% had attained a university degree. These findings underline the community's socio-economic challenges, particularly in education and livelihood diversification. Strengthening access to education and providing opportunities for alternative income sources could enhance overall well-being and socio-economic development in these areas (Boarini et al. 2018).

Table 1. Socio-demographics of respondents

Variable	**Category**	**Frequency**	**Percentage (%)**
Gender	Male	24	22.9
	Female	81	77.1
Occupation	Farmer	52	49.5
	Homemaker	40	38.1
	Trader	13	12.4
Age	26–35 years	17	16.2
	36–45 years	23	21.9

	46–55 years	44	41.9
	>55 years	21	20.0
Education	No education	30	28.6
	Elementary school	47	44.8
	Junior high school	18	17.1
	Senior high school	8	7.6
	University	2	1.9

Diversity of edible plants

Food plays a vital role in shaping social and cultural dynamics within a community. Therefore, every aspect of cooking and eating behavior reflects societal habits and serves as a form of cultural expression and identity. Karanganyar Regency, Central Java, is located in a highland area with a cool climate, especially in the foothills of Mount Lawu. This condition is highly conducive to the growth of various vegetables and fruits. Research identified 50 plant species from 27 families. The most commonly found plants belong to the Fabaceae family, including kacang panjang (Vigna unguiculata (L.) Walp), petai (Parkia speciosa Hassk.), jengkol (Archidendron pauciflorum), and turi (Sesbania grandiflora (L.) Poir.). This diversity highlights the significant agricultural potential of Karanganyar Regency and reflects the biodiversity that supports the local community's food needs.

Table 2. List of edible plants commodities that are commonly traded in Blimbing, Tepus, and Sumberejo, Mojogedang, Karanganyar, Central Java

No.	**Scientific Name**	**Family**	**Local Name**	**Habit**	**Utilization Category**	**Part Use**
1	Mangifera indica L.	Anacardiaceae	Mangga	Tree	Fruit	Fruit
2	Durio zibethinus Murray	Malvaceae	Durian	Tree	Fruit	Fruit
3	Carica papaya L.	Caricaceae	Buah pepaya	Tree	Fruit	Fruit
4	Carica papaya L.	Caricaceae	Daun pepaya	Tree	Vegetable	Leaf
5	Carica papaya L.	Caricaceae	Bunga pepaya	Tree	Vegetable	Flower
6	Ipomoea batatas (L.) Lam	Convolvulaceae	Ubi jalar	Climber	Staple Food	Tuber
7	Ipomoea batatas var. purpurea	Convolvulaceae	Ubi ungu	Climber	Staple Food	Tuber
8	Ananas comosus (L.) Merr.	Bromeliaceae	Nanas	Herb	Fruit	Fruit
9	Musa acuminata Colla	Musaceae	Pisang	Tree	Fruit	Fruit
10	Capsicum annuum L.	Solanaceae	Cabai	Shrub	Vegetable	Seed
11	Capsicum frutescens L.	Solanaceae	Cabai rawit	Shrub	Vegetable	Seed
12	Solanum melongena L.	Solanaceae	Terong	Shrub	Vegetable	Fruit
13	Allium cepa L. var. aggregatum	Alliaceae	Bawang merah	Herb	Vegetable	Bulb

14	Zingiber officinale Roscoe	Zingiberaceae	Jahe	Herb	Spice	Rhizome /Root
15	Citrus aurantiifolia	Rutaceae	Jeruk nipis	Tree	Vegetable	Fruit
16	Citrus limon L.	Rutaceae	Jeruk lemon	Tree	Fruit	Fruit
17	Annona muricata L.	Annonaceae	Sirsak	Tree	Fruit	Fruit
18	Persea americana Mill.	Lauraceae	Alpukat	Tree	Fruit	Fruit
19	Artocarpus heterophyllus Lam.	Moraceae	Nangka	Tree	Fruit	Fruit
20	Manihot esculenta Crantz	Euphorbiaceae	Singkong	Shrub	Staple Food	Tuber
21	Manihot esculenta Crantz	Euphorbiaceae	Daun singkong	Shrub	Vegetable	Leaf
22	Parkia speciosa Hassk.	Fabaceae	Petai	Tree	Vegetable	Seed
23	Archidendron pauciflorum	Fabaceae	Jengkol	Tree	Vegetable	Seed
24	Cucumis sativus L.	Cucurbitaceae	Timun	Climber	Vegetable	Fruit
25	Brassica juncea (L.) Czern	Brassicaceae	Sawi	Herb	Vegetable	Leaf
26	Amaranthus hybridus L.	Amaranthaceae	Bayam	Shrub	Vegetable	Leaf
27	Ipomoea aquatica Forssk	Convolvulaceae	Kangkung	Herb	Vegetable	Leaf
28	Colocasia esculenta L. Schott	Araceae	Talas	Tree	Staple Food	Tuber
29	Dimocarpus longan Lour.	Sapindaceae	Kelengkeng	Tree	Fruit	Fruit
30	Syzygium aromaticum (L.) Merr.	Myrtaceae	Cengkeh	Tree	Spice	Flower
31	Sesbania grandiflora (L.) Poir.	Fabaceae	Turi	Shrub	Vegetable	Flower
32	Dioscorea alata L.	Dioscoreaceae	Ketela madu	Climber	Staple Food	Tuber
33	Musa X paradisiaca L.	Musaceae	Pisang raja	Tree	Fruit	Fruit
34	Vigna unguiculata (L.) Walp	Fabaceae	Kacang panjang	Shrub	Vegetable	Seed
35	Nephelium lappaceum L.	Sapindaceae	Rambutan	Tree	Fruit	Fruit
36	Citrus hystrix DC.	Rutaceae	Jeruk purut	Tree	Fruit	Fruit
37	Psidium guajava L.	Myrtaceae	Jambu biji	Tree	Fruit	Fruit

38	Averrhoa carambola L.	Oxalidaceae	Belimbing	Tree	Fruit	Fruit
39	Gnetum gnemon L.	Gnetaceae	Melinjo	Tree	Vegetable	Seed
40	Cosmos caudatus Kunth	Asteraceae	Kenikir	Herb	Vegetable	Leaf
41	Manilkara zapota (L.) P.Royen	Sapotaceae	Sawo	Tree	Fruit	Fruit
42	Anacardium occidentale L.	Anacardiaceae	Jambu mete	Tree	Fruit	Fruit
43	Citrus maxima (Burm.) Merr.	Rutaceae	Jeruk Bali	Tree	Fruit	Fruit
44	Vitis vinifera L.	Vitaceae	Anggur	Climber	Fruit	Fruit
45	Spondias dulcis Forst.	Anacardiaceae	Kedondong	Tree	Fruit	Fruit
46	Cocos nucifera L.	Arecaceae	Kelapa	Tree	Fruit	Fruit
47	Leucaena leucocephala Lam.	Fabaceae	Petai cina	Tree	Vegetable	Seed
48	Syzygium polyanthum Wight	Myrtaceae	Daun Salam	Tree	Vegetable	Leaf
49	Syzygium aqueum (Burm. f.) Alston.	Myrtaceae	Jambu Air	Tree	Fruit	Fruit
50	Pometia pinnata (J.R Forst. & G. Forst.)	Sapindaceae	Matoa	Tree	Fruit	Fruit

Utilization of edible plants

Edible plants play a very important role in human life, both in terms of health, economy and environmental sustainability. Based on data, various edible plants provide different benefits that include sources of nutrition, medicine, and economic contributions. Fruit plants such as Mangifera indica L., Durio zibethinus Murray, Musa acuminata Colla, and Citrus aurantiifolia are major sources of vitamin C, which is important for boosting the immune system, repairing tissues, and protecting cells from free radicals (Nasution et al. 2023). The plant part utilized is the fruit, which accounts for about 38.7% of the total plant parts used. In addition, the fruit of Persea Americana Mill. fruit is rich in healthy fats, such as oleic acid, which supports heart health and aids in nutrient absorption (Iskandar et al. 2021). The fruit of Ananas comosus (L.) Merr. also provides special benefits through the enzyme bromelain, which aids protein digestion.

In addition to fruit plants, vegetable plants play an important role in providing fibre, vitamins and minerals that support a healthy body. Plants such as Amaranthus hybridus L., Ipomoea aquatica Forssk., and Brassica juncea (L.) Czern contain iron, calcium, and vitamin K which are important for bone health and preventing anaemia (Hernawati et al. 2022). The part utilised is the leaf, which accounts for 25.4% of the total plant parts utilised in this category. Some plants such as Carica papaya L. and Manihot esculenta Crantz have a diversity of parts that can be used (Kurniati et al. 2022). In papaya, the fruit is utilised as a source of vitamins A and C, the leaves as vegetables rich in vegetable protein, and the flowers are used in various traditional dishes. In cassava, the tubers are a staple food rich in carbohydrates, while the leaves are often used as vegetables containing antioxidants.

Herbs and spices such as Zingiber officinale Roscoe, Syzygium aromaticum (L.) Merr., and Syzygium polyanthum Wight provide additional health benefits. Ginger rhizome, which accounts for 15.8% of the traded plant parts in the spice category, has anti-inflammatory properties and helps relieve nausea and improve digestion. Cloves, with their floral parts, contain eugenol, an active compound that has antiseptic, antioxidant, and pain-relieving

properties (Kaushik et al. 2021). Bay leaves are often used as a spice to remove fishy odours and give dishes a distinctive aroma.

Staple edible plants such as Ipomoea batatas (L.) Lam., Dioscorea alata L., and Colocasia esculenta L. Schott provide the main energy for local communities. The part utilised is the tuber, which accounts for 22.5% of the plant parts used, as per the data. These tubers are not only a good source of complex carbohydrates for long-lasting energy but also contain fibre that supports digestive health. According to Nasution et al (2023) some plants such as Cocos nucifera L. have uses for almost all their parts, from the fruit that produces water, meat, and oil, to the stems and leaves that are used in various purposes.

This diversity of edible plants contributes greatly to the economy of the community through the trade of plants. For example, fruits such as Citrus limon L. and Vitis vinifera L. are not only consumed directly but also utilized in the health and beauty industry. Lemon is often used in skin lightening and detoxification products, while grape seeds contain resveratrol, a compound that supports heart health.

Use Value (UV) and Relative Frequency of Citation (RFC)

Based on the results of the study, in Table 3 the results of the Use Value (UV) value of plant species varied between 0.010 to 0.038. The species with the highest UV value was Cocos nucifera L. (0.038), followed by Citrus limon L. and Zingiber officinale Roscoe with a value of 0.029 each. Cocos nucifera L. belongs to the Arecaceae family, while Citrus limon L. comes from the Rutaceae family, and Zingiber officinale Roscoe from the Zingiberaceae family. The high UV value of a plant indicates the level of public trust in its efficacy (Yusro et al. 2020). The more people who use a plant, the higher the UV value, and vice versa (Lusiana et al., 2023). Cocos nucifera L., or coconut, occupies the highest position because it is known as a versatile plant, even dubbed the “Tree of Life”. Every part of the coconut has benefits, ranging from food sources, traditional medicine, to handicraft materials (Ryandita et al. 2020). In the context of food, coconut meat can be consumed directly or processed into coconut milk and urap. Green coconut water is believed to be an antidote, dehydrator, heat reducer, and enhancer of pregnancy fitness and fertility (Solechah et al. 2021). Coconut water also contains natural electrolytes such as calcium, potassium, sodium, and glucose, which are useful for overcoming dehydration (Hasibuan & Simanullang, 2018). This diversity of benefits is the reason for the high UV value of coconut.

Meanwhile, the results of the Relative Frequency of Citation (RFC) value in table 3, plants range from 0.010 to 0.305. The species with the highest RFC value was Mangifera indica L. (0.305), followed by Persea americana Mill. (0.267) and Durio zibethinus Murray (0.248). In contrast, Syzygium polyanthum Wight had the lowest RFC value (0.010). The high RFC value indicates that the plant has many benefits and is often used by the local community (Wahdina et al., 2023). Mangifera indica L., or mango, is favored by people because of its distinctive aroma, taste that varies from sour to sweet, and soft texture. This fruit contains various vitamins, such as vitamins A, B1, B2, C, and a number of minerals (Rasmikayati et al. 2019). Apart from being rich in nutrients, mangoes also contain antioxidants that are beneficial for maintaining heart health, overcoming arthritis, and restoring stamina (Kumalasari et al. 2021). Mangoes are usually consumed fresh, although some are processed into pickles or sweets. Mangoes grow well in Indonesia, especially on Java Island, so they are easy to find in markets and homes. Conversely, a low RFC value indicates that the plant is less known or rarely utilized by the community, such as Syzygium polyanthum Wight, or bay leaves (Wahdina et al. 2023).

Table 3. Utilization, UV, and RFC of edible plants in Blimbing, Tepus, and Sumberejo, Sewurejo, Mojogedang, Karanganyar, Central Java

Scientific Name	**Family**	**Local Name**	**Habit**	**Utilization Category**	**Part Use**	**UV**	**RFC**
Mangifera indica L.	Anacardiaceae	Mangga	Tree	Fruit	Fruit	0,010	0,305
Durio zibethinus Murray	Malvaceae	Durian	Tree	Fruit	Fruit	0,019	0,248

Carica papaya L.	Caricaceae	Buah pepaya	Tree	Fruit	Fruit	0,019	0,124
Carica papaya L.	Caricaceae	Daun pepaya	Tree	Vegetable	Leaf	0,010	0,048
Carica papaya L.	Caricaceae	Bunga pepaya	Tree	Vegetable	Flower	0,010	0,029
Ipomoea batatas (L.) Lam	Convolvulaceae	Ubi jalar	Climber	Staple Food	Tuber	0,019	0,114
Ipomoea batatas var. purpurea	Convolvulaceae	Ubi ungu	Climber	Staple Food	Tuber	0,010	0,038
Ananas comosus (L.) Merr.	Bromeliaceae	Nanas	Herb	Fruit	Fruit	0,010	0,067
Musa acuminata Colla	Musaceae	Pisang	Tree	Fruit	Fruit	0,010	0,190
Capsicum annuum L.	Solanaceae	Cabai	Shrub	Vegetable	Seed	0,010	0,067
Capsicum frutescens L.	Solanaceae	Cabai rawit	Shrub	Vegetable	Seed	0,010	0,095
Solanum melongena L.	Solanaceae	Terong	Shrub	Vegetable	Fruit	0,010	0,181
Allium cepa L. var. aggregatum	Alliaceae	Bawang merah	Herb	Vegetable	Bulb	0,010	0,048
Zingiber officinale Roscoe	Zingiberaceae	Jahe	Herb	Spice	Rhizome/ Root	0,029	0,067
Citrus aurantiifolia	Rutaceae	Jeruk nipis	Tree	Vegetable	Fruit	0,019	0,048
Citrus limon L.	Rutaceae	Jeruk lemon	Tree	Fruit	Fruit	0,029	0,029
Annona muricata L.	Annonaceae	Sirsak	Tree	Fruit	Fruit	0,010	0,105
Persea americana Mill.	Lauraceae	Alpukat	Tree	Fruit	Fruit	0,010	0,267
Artocarpus heterophyllus Lam.	Moraceae	Nangka	Tree	Fruit	Fruit	0,019	0,229
Manihot esculenta Crantz	Euphorbiaceae	Singkong	Shrub	Staple Food	Tuber	0,019	0,200
Manihot esculenta Crantz	Euphorbiaceae	Daun singkong	Shrub	Vegetable	Leaf	0,010	0,095
Parkia speciosa	Fabaceae	Petai	Tree	Vegetable	Seed	0,010	0,057

Hassk.							
Archidendron pauciflorum	Fabaceae	Jengkol	Tree	Vegetable	Seed	0,010	0,019
Cucumis sativus L.	Cucurbitaceae	Timun	Climber	Vegetable	Fruit	0,019	0,029
Brassica juncea (L.) Czern	Brassicaceae	Sawi	Herb	Vegetable	Leaf	0,010	0,086
Amaranthus hybridus L.	Amaranthaceae	Bayam	Shrub	Vegetable	Leaf	0,010	0,057
Ipomoea aquatica Forssk	Convolvulaceae	Kangkung	Herb	Vegetable	Leaf	0,010	0,038
Colocasia esculenta L. Schott	Araceae	Talas	Tree	Staple Food	Tuber	0,019	0,048
Dimocarpus longan Lour.	Sapindaceae	Kelengkeng	Tree	Fruit	Fruit	0,010	0,162
Syzygium aromaticum (L.) Merr.	Myrtaceae	Cengkeh	Tree	Spice	Flower	0,019	0,067
Sesbania grandiflora (L.) Poir.	Fabaceae	Turi	Shrub	Vegetable	Flower	0,010	0,019
Dioscorea alata L.	Dioscoreaceae	Ketela madu	Climber	Staple Food	Tuber	0,010	0,019
Musa X paradisiaca L.	Musaceae	Pisang raja	Tree	Fruit	Fruit	0,019	0,124
Vigna unguiculata (L.) Walp	Fabaceae	Kacang panjang	Shrub	Vegetable	Seed	0,010	0,057
Nephelium lappaceum L.	Sapindaceae	Rambutan	Tree	Fruit	Fruit	0,010	0,171
Citrus hystrix DC.	Rutaceae	Jeruk purut	Tree	Fruit	Fruit	0,010	0,048
Psidium guajava L.	Myrtaceae	Jambu biji	Tree	Fruit	Fruit	0,019	0,152
Averrhoa carambola L.	Oxalidaceae	Belimbing	Tree	Fruit	Fruit	0,010	0,210
Gnetum gnemon L.	Gnetaceae	Melinjo	Tree	Vegetable	Seed	0,010	0,114
Cosmos caudatus Kunth	Asteraceae	Kenikir	Herb	Vegetable	Leaf	0,010	0,048
Manilkara zapota (L.) P.Royen	Sapotaceae	Sawo	Tree	Fruit	Fruit	0,010	0,114
Anacardium occidentale L.	Anacardiaceae	Jambu mete	Tree	Fruit	Fruit	0,010	0,086

Citrus maxima (Burm.) Merr.	Rutaceae	Jeruk Bali	Tree	Fruit	Fruit	0,010	0,038
Vitis vinifera L.	Vitaceae	Anggur	Climber	Fruit	Fruit	0,019	0,029
Spondias dulcis Forst.	Anacardiaceae	Kedondong	Tree	Fruit	Fruit	0,010	0,038
Cocos nucifera L.	Arecaceae	Kelapa	Tree	Fruit	Fruit	0,038	0,181
Leucaena leucocephala Lam.	Fabaceae	Petai cina	Tree	Vegetable	Seed	0,010	0,038
Syzygium polyanthum Wight	Myrtaceae	Daun Salam	Tree	Vegetable	Leaf	0,010	0,010
Syzygium aqueum (Burm. f.) Alston.	Myrtaceae	Jambu Air	Tree	Fruit	Fruit	0,010	0,086
Pometia pinnata (J.R Forst. & G. Forst.)	Sapindaceae	Matoa	Tree	Fruit	Fruit	0,010	0,048

Index of Cultural Significance (ICS)

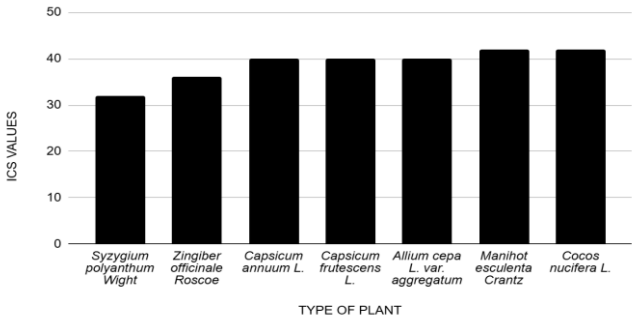

Figure 1. ICS values of edible plants traded in Blimbing, Tepus, and Sumberejo, Sewurejo, Mojogedang, Karanganyar, Central Java

The Index of Cultural Significance (ICS) reflects the importance of plants in the local community's life, encompassing their use as food (staples/vegetables/fruits), cooking spices, traditional medicine, and cultural values (rituals). Plants such as Cocos nucifera L. (coconut) and Manihot esculenta Crantz (cassava), with the highest ICS value (42), demonstrate their crucial role. Cocos nucifera L. is often used as a key ingredient in cooking, consumed directly as a fruit, processed into beverages, and utilized in cultural rituals during certain celebrations. Meanwhile, Manihot esculenta Crantz serves as a significant carbohydrate source, popular as a staple food among the local community and often considered a primary choice. Additionally, Capsicum annuum L., Capsicum frutescens L., and Allium cepa L. var. aggregatum, each with an ICS value of 40, highlight their significance as essential culinary ingredients in daily dishes, especially sambal and traditional Indonesian seasoning bases. Plants with slightly lower ICS values, such as Zingiber officinale Roscoe (ginger) and Syzygium polyanthum Wight (Indonesian bay leaf), still play an important role, though their uses are more specific. Zingiber officinale Roscoe is often utilized as an ingredient in traditional medicine and health beverages, while Syzygium polyanthum Wight serves as a seasoning in certain dishes. High ICS values

indicate plants that significantly contribute to daily life, whether for food, health, or cultural traditions. In contrast, lower ICS values reflect plants used in more limited contexts, yet they remain valuable to the local community.

ACKNOWLEDGEMENTS

The authors would like to thank the communities of Blimbing, Tepus, and Sumberejo in Sewurejo Village, Mojogedang, Karanganyar, Central Java, for their participation as respondents in this study. We would also like to thank the local government for their support and for providing the necessary permissions, ensuring that the study could be carried out effectively and without any obstacles.

CONCLUSION

The results of the study found 50 species from 27 families. The most common plants found from the results of this study came from the Fabaceae family such as Parkia speciosa Hassk., Vigna unguiculata (L.) Walp, and Archidendron pauciflorum, and others. Based on the data, various food plants provide different benefits according to their respective uses, such as being staple foods, vegetables, fruits, drinks, spices, medicines, and others. The part of the plant that is utilized is the fruit, which accounts for around 38.7% of the total plant parts utilized. Then followed by leaves which accounted for 25.4% of the total plant parts utilized. In the benefits with the staple food category, part of the tubers accounted for 22.5% of the plant parts utilized.

The results of the Use Value (UV) value of plant species varied between 0.010 to 0.038. The species with the highest UV value was Cocos nucifera L. (0.038), followed by Citrus limon L. and Zingiber officinale Roscoe with a value of 0.029 each. The species with the highest RFC value was Mangifera indica L. (0.305), followed by Persea americana Mill. (0.267) and Durio zibethinus Murray (0.248). In contrast, Syzygium polyanthum Wight had the lowest RFC value (0.010). The highest ICS value yaitu spesies Cocos nucifera L. and Manihot esculenta Crantz with a total value of 42. Plants with slightly lower ICS values, such as Zingiber officinale Roscoe and Syzygium polyanthum Wight, still play an important role, though their uses are more specific.

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