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THE DIVERSITY OF PLANT AS TRADITIONAL CULINARY FOOD WRAPPERS ON THE BOGOR'S SOCIETY, WEST JAVA PROVINCE, INDONESIA

KEANEKARAGAMAN TUMBUHAN SEBAGAI PEMBUNGKUS MAKANAN TRADISIONAL DI KOTA BOGOR, JAWA BARAT, INDONESIA

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Abstract

Traditional culinary is a food that has a distinctive taste, commonly consumed by a particular society. Generally, traditional culinary using the diversity of plants to wrap food. The function of plant leaves for food wrapping in consider of natural and safe material. The use of natural materials is very valuable traditional knowledge and includes cultural wealth. The research was conducted to reveal the diversity of plants that are still used as traditional culinary wrapping in Bogor city. This research method used the ethnobotany approach, through observation and direct interview to a key informant up to 20 respondents on the three traditional market's in Bogor city. The data collection results were produced of 23 types of cuisines in the traditional culinary markets, namely Anyar/Kembang, Sukasari, and Surya Kencana. These traditional culinary are utilized five plant species to wrap food, mostly using banana leaves (Musa spp.) for food packaging of 23 types of the tradisional culinary delights. The advantage of utilizing plants as traditional culinary wrapping infused with flavor to enhance the taste and art. Utilization plants as food wrapping need to preserved, developed, and socialized to public due to its local wisdom environmental sustainability and to reduce the use of non-natural resources that have severe environmental impacts and public health.

Keywords: Bogor; Ethnobotany; Leaf wrap; Traditional culinary; West Java

Abstrak

Kuliner tradisional merupakan suatu makanan yang mempunyai cita rasa yang khas, biasa dikonsumsi oleh masyarakat tertentu. Umumnya kuliner tradisional memanfaatkan keanekaragaman tumbuhan sebagai pembungkusnya. Penggunaan daun sebagai pembungkus karena bahan alami dan aman untuk membungkus makanan. Penggunaan bahan dari alam adalah pengetahuan tradisional sangat berharga dan termasuk kekayaan budaya. Penelitian tersebut dilakukan untuk mengungkap keanekaragaman tumbuhan yang masih digunakan sebagai pembungkus kuliner tradisional di Kota Bogor. Metode penelitian menggunakan pendekatan etnobotani, melalui observasi dan wawancara langsung kepada informan kunci sebanyak 20 responden di tiga pasar tradisional kota Bogor. Hasil pendataan menunjukkan terdapat 23 jenis kuliner tradisional di pasar Anyar/Kembang, Sukasari, dan Surya Kencana. Kuliner tradisional ini memanfaatkan 5 jenis tumbuhan sebagai pembungkusnya yang sebagian besar adalah daun pisang (Musa spp.) yang digunakan sebagai pembungkus 23 kuliner tradisional. Keuntungan memanfaatkan tumbuhan sebagai pembungkus kuliner tradisional antara lain untuk menambah cita rasa dan seni. Pemanfaatan tumbuhan sebagai pembungkus makanan perlu dilestarikan, dikembangkan, dan disosialisasikan kepada masyarakat umum agar budaya lokal ini senantiasa lestari dan dapat mengurangi pemanfaatan sumber daya non alam yang berdampak buruk terhadap lingkungan dan kesehatan masyarakat.

***Kata kunci**: Bogor; Bungkus daun; Etnobotani; Jawa Barat; Kuliner tradisional*

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INTRODUCTION

Plants constitute an important factor for life on the earth, besides the world's lungs, also act as in human life. Many plant species are utilized to source food, medicine, clothing, and board by humans to their life necessities every day (Haryanti et al., 2015), Indonesia is no exception. Indonesia is famous for local food diversity, especially traditional culinary which utilizes plants as a primary source or as its wrapping (Diyah, 2013). Generally, parts of plants that were used as food wrapping are leaves, however not a little using the other part of plants, for example, rind or bark. The natural material of culinary wrapping was used to retard expiration and protect from chemical and biological contamination (Sari et al., 2019).

Indonesia's traditional culinary has high diversity, different each locality, and be identity every region. The development of traditional culinary delights in Bogor is incredibly diverse, abundant, and just as enticing as those of other ethnic groups in Indonesia. From hearty main courses to light snacks and refreshing, healthy beverages, Bogor's culinary offerings are truly a feast for the senses (Sari et al., 2019; Suciani et al., 2021). Hearty dishes such as doclang, yellow soto, fried bean sprouts laksa, soto mie, and many others are among the local favorites.

In addition to heavy meals, there are also various traditional snacks in Bogor that many tourists are not yet aware of. These traditional delicacies, in the form of moist cakes, can be found in three traditional markets in the city, wrapped in plant leaves (Gaul, 2022). Because the three markets are close to tourist areas, among Bogor Botanical Garden, National Museum of Indonesia Natural History (Munasain), Museum of Zoology, Museum of Palace, Museum of Land and Agriculture, and Museum of Patriot.

As times become increasingly modern and sophisticated, many sellers of traditional food or dishes use plastic and styrofoam to wrap their food. The practical and durable advantages of plastic and styrofoam have become a high attraction for sellers and consumers to use them. Its light and strong nature makes plastic bags practical to use. In reality, the use of plastic bags causes problems in handling them, such as requiring tens to hundreds of years to decompose naturally (Sumari et al., 2019). Likewise, the use of styrofoam (polystyrene plastic) as packaging for food or drinks is increasingly popular because it is cheap and practical. However, the side effects are quite bad. Food contamination due to the use of styrofoam can occur because food or drinks are too hot, styrofoam food packaging can release styrene toxins when exposed to heat (Utomo & Solin, 2021). The higher the temperature of the food in the styrofoam, the easier it is for the styrene substance to move into the food. According to Utomo and Solin (2021), styrofoam contains benzene and styrene which are believed to be harmful to human health, namely causing cancer or being a carcinogen. One alternative is to use natural wrapping leaves which are more easily decomposed and environmentally friendly. Therefore, there is a need for research regarding documentation of the diversity of plant species as traditional food wrapping leaves used in the city of Bogor.

Previous research conducted by Rini (2015) in the Merawang District, Bangka Regency, identified 12 types of plants belonging to 7 different families whose leaves are used as traditional food wrappers. Another research conducted by Sari et al. (2019) in Central Bangka Regency, which consists of 6 sub-districts (Pangkalan Baru, Namang, Simpang Katis, Sungai Selan, Koba, and Lubuk), 10 types of plants from 7 families were obtained whose leaves were used as food wrappers. Based on this, there has been no scientific study regarding the use of plant species whose leaves are used as food wrappers by the people of Bogor city, so this research needs to be carried out. This research aims to collect data, reveal and document public knowledge about plant types and how they are used as food packaging materials by the people of Bogor city.

Species diversity of plants were used as culinary wrapping that needed to be explored to know their advantages, so it can attract the attention of society for using plants as a food wrapping again. It was conducted to reduce plastic and styrofoam consumption which gave negative impacts on public health and environment (Novianti & Kartika, 2017).

MATERIALS AND METHODS

This ethnobotany research was conducted in the three of Bogor city's traditional markets, namely Anyar/Kembang, Sukasari, and Surya Kencana (Figure 1). Bogor city is located in West Java Province, Indonesia.

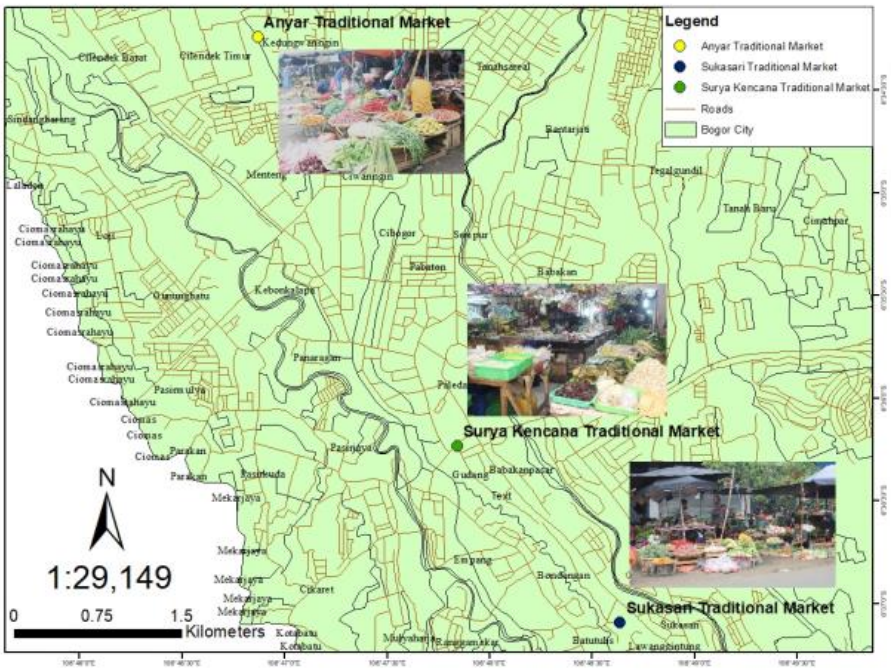

Figure 1. The study area of diversity of plant as traditional culinary food wrappers on the Bogor's society, West Java, Indonesia. Research location: Anyar/Kembang market, Sukasari market, and Surya Kencana market

Data collection was conducted by interviewing some merchants of traditional culinary in the research area. Determination of research location based on consideration of market characteristics. The traditional markets on this research are located nearby Bogor's Commuter Line (KRL) station and some tourism areas, among Bogor Botanical Garden, National Museum of Indonesia Natural History (Munasain), Museum of Zoology, Museum of Palace, Museum of Land and Agriculture, and Museum of Patriot. The interviewing was conducted with three key informants in each traditional market, namely the merchant of food wrapping plants, merchant of traditional culinary, and buyers. The selected key informants are individuals who truly understand and have experience in utilizing leaves as food wrappers. The respondents in this study consisted of 7 food vendors (4 at Anyar/Kebun Kembang market, 2 at Bogor market, and 1 at Sukasari market); 7 leaf vendors (3 selling banana leaves, 1 selling sweet potato leaves, 1 selling bamboo leaves, and 2 selling other types of leaves, namely coconut leaves and corn husks); and 6 buyers.

This research method was using a qualitative approach (Maleong, 2013), through interviews and direct observation. It had been done to find species and plant characteristics that are used as food wrapping and other traditional culinary. The voucher herbarium specimens were accessioned and deposited in the Herbarium Bogorienze (BO) Directorate of Scientific Collection Management, National Research and Innovation Agency of Republic of Indonesia for future study and reference. Each species is identified its scientific name and validated used plants of the world online (POWO) website (POWO, 2023). Data was collected that comprised of plants species, part of plants, the reason for using it, and other benefits. The interview data were analysed qualitatively. Tables were utilized to depict qualitative analysis.

RESULTS

The result of this study showed 23 types of traditional culinary. These traditional culinary is using part of plants for wrapping in the Bogor city's traditional market, among various side dishes, local cake, and the other snacks. There are five plant species used as traditional culinary wrapping.

The most of plant's parts are leaves (4 species) and rind (1 species). The result of the interview has been admitted that several benefits of plants part besides wrapping traditional culinary are enhancing flavor in food, food preservative, and improve the food appearance. The following is attached to Table 1 that showed about species diversity of plants used as traditional culinary wrapping in Bogor city's traditional market.

Table 1. Diversity of plants species as traditional culinary wrapping on the Bogor's Society in traditional market

Scientific/family name	Local name	Part of plant	Culinary variety	Number of culinary
Musa spp. (*Musaceae*)	Cau/gedang	Leaves	Lemper, nagasari, bugis, ketimus, serabi solo, buras, pepes, tempe mendoan, lontong, uli/ gemblong, lupis, and jongkong	14
Phrynium pubinerve Blume. (*Marantaceae*)	Patat	Leaves	Toge goreng and doclang	2
Gigantochloa spp. (*Poaceae*)	Awi	Leaves	Bacang, pesor, and kwecang	3
Cocos nucifera L. (*Arecaceae*)	Kalapa	Leaves	Ketupat and lepet	2
Zea mays L. (*Poaceae*)	Jagung	Fruit cobs "klobot"	Wajit and dodol	2

Traditional culinary is unique in the Bogor city which used banana leaves as wrappings, such as tempe mendoan, lemper, buras, bugis, papais, pepes, and lemet (Figure 2). In addition to using banana leaves that are green or fresh, there is also the use of dry leaves (klaras) as packaging for palm sugar and dodol. Moreover, the banana leaves easier to find because it is one of the plant species which produced fruits commonly cultivated by local society. Traditional culinary specialties from the city of Bogor use leaves as other wrappers such as patat leaves to wrap tauge goreng (Figure 3); bamboo leaves as wrappers for kwecang and bacang (Figure 4); coconut leaves as wrappers for lepet and ketupat (Figure 5) and corn leaves as wrappers for kelobot, wajit, and dodol (Figure 6).

The trader of traditional culinary in the traditional market's city of Bogor has been in service since existing 30 years ago. The traders of traditional culinary were dominated by man of Sunda ethnic, one of ethnic group in Java Island. The respondents on average are aged between 36–60 years old, continuing the family business, and starting a business since the 1990s. Packaging materials for food are used to extend the shelf life of food and provide mechanical protection against chemical and biological contamination. One safe type of food packaging material is natural materials like leaves. The utilization of natural materials such as leaves as food packaging has positive impacts on the environment and consumers because they do not contain harmful or toxic chemicals, easy to find, easy to fold, and impart a pleasant aroma to food. In addition, the use of leaves as food packaging is valuable traditional knowledge, representing cultural wealth that should be explored, preserved, and developed to ensure that such knowledge is not lost.

Some of the advantages of food wrapped in leaves according to several sources are that it protects and preserves the product, as a product identity, in this case the packaging can be used as a means of communication and information to consumers through packaging design that shows the characteristics of a food, giving a distinctive aroma to a food. food and cooking, as well as adding flavor. The characteristics of the respondents in this study were categorized based on gender and domicile. The following is a table of respondent characteristics based on gender.

Table 2. Characteristics of respondents according to gender

Gender	Number of people	Percentage
Male	15	75%
Female	5	25%

Based on Table 2, it can be seen that the majority of respondents from this study are male. As many as 75% or 15 of the respondents we interviewed were man. On the other hand, as many as 25% or 5 people are women. From the table above it can be seen that man carry out more buying

and selling transactions due to the need for wrapping leaves for food, to trade traditional dishes or as buyers of these traditional dishes.

Table 3. Respondent characteristics according to location

Location	Number of people	Percentage
Central Bogor	6	30%
South Bogor	5	25%
East Bogor	3	15%
Depok	4	20%
Jakarta	2	10%

Based on Table 3, data was obtained that the respondents' location in Central Bogor dominated the use of wrapping leaves for traditional dishes by 30%, the remaining 25% came from South Bogor.

Figure 2. Traditional culinary is unique in the Bogor city which used banana leaves (*Musa* spp.) as wrappings, tempe mendoan (a), lemper (b); buras (c), bugis (d), papais (e), pepes (f). Note= original scale 1:8

Figure 3. Traditional culinary is unique in the Bogor city which used patat leaves (*Phrynium pubinerve* Blume.) as wrappings is tauge goreng. Note= original scale 1:4

Figure 4. Traditional culinary is unique in the Bogor city which used bamboo leaves (*Gigantochloa* spp.) as wrappings are kwecang (a) and bacang (b). Note= original scale 1:4

Figure 5. Traditional culinary is unique in the Bogor city which used coconut leaves (*Cocos nucifera* L.) as wrappings are lepet (a) and ketupat (b). Note= original scale 1:4

Figure 6. Traditional culinary is unique in the Bogor city which used corn leaves (*Zea mays* L.) as wrappings are wajit (a) and dodol (b). Note: Original scale 1:5

DISCUSSION

Currently, the utilization of plants is rarely found as food wrapping. It is caused by technological advances that produced the cheapest and easy products than food wrapping from plants. The type of food wrapping materials will increase the endurance of food storage and contamination rate (Rini & Akbarini, 2017). Its benefit as preservatives is supported by Sucipta et al. (2017) show that leaves are safe to use, biodegradable than plastic usage. Diyah (2013) explained that food wrapping from plants is one of the methods to make the food look more attractive and increase the taste and flavor of food. Sari et al. (2019) show stated that there were 7 plant species used in traditional food wrapping by Bangka Tengah district society. According to Maflahah (2012), leaves are often utilized as traditional food wrapping which are banana leaves, cornhusk, coconut leaves, water apple's leaves, and teak's leaves. The following is an explanation about the diversity of plants species that were used as traditional culinary wrapping in Bogor city's traditional market:

***Musa* spp.**

Banana is one of the plants which produce fruits every moment without a certain period time. It can be grown in the tropic climate area, such as Indonesia (Hartono & Janu, 2013). Banana trees are grown relatively easily and produced fruits faster than other plants. Based on price, banana fruit is range IDR 15 thousand to IDR 20 thousand (Wahyuni, 2020), that gave benefit for banana's farmer (Hidayat, 2013). The most common part of plants that were used as traditional culinary wrapping is leaves. Banana leaves are a type of food packaging material that is safe to use because they contain natural ingredients and are generally in the form of leaves that are still green (Suparti & Safitri, 2020). The utilization of banana leaves as food wrapping was conducted in Indonesia's ancestors years ago. Some food rarely was founded without banana leaves as wrapping. The results showed that many still culinary merchants in the Bogor city's traditional market, which used banana leaves as wrapping. In addition, Leaves are easily accessible and inexpensive, as well as more environmentally friendly since they can decompose quickly. The reason for a merchant using banana leaves, besides cheaper also its leaves have a smooth surface and it is not rigid. It is giving easiness for a merchant to pack up and improve the food appearance on the culinary based on their desire that increased aesthetic value. Results of the interview known that banana leaves also enhancing flavor on the food which is wrapped. The flavor came from polyphenols contents which are given delicious flavor and antioxidants (Mastuti & Handayani, 2014). Traditional culinary is unique in the Bogor city which used banana leaves as wrappings, such as tempe mendoan, lemper, nagasari, bugis, ketimus, serabi solo, buras, pepes, lontong, uli/gemblong, lupis, and jongkong (Figure 2). In addition to using banana leaves that are green or fresh, there is also the use of dry leaves (klaras) as packaging for palm sugar and dodol, if used, besides being able to reduce agricultural waste, it also has some quite high nutritional content (Suparti & Safitri, 2020). Moreover, the banana leaves easier to find because it is one of the plant species which produced fruits commonly cultivated by local society.

Based on the results of observation and interview on the banana's leaves merchant, known that the species of banana's leaves which is used in food wrapping is *Musa brachycarp*a Backer (Batu banana). It has a soft and smooth texture, also is not easily ripped. The size of *Musa brachycarpa* leaves is appreciable and it has shiny color. It was utilized to give flavor, beautiful color, and natural, so that increased appetite buyers. Besides, *M. brachycarpa* leaves (Batu banana), *M. acuminate* leaves (Kepok banana) are also used in traditional culinary wrapping, namely getuk and tiwul. Many studies have been conducted to test the activity of banana leaves. Although the banana family is of more interest for its nutrient than its medical properties, it has some value in traditional medicine. Herbalists use the leaves and the peel of the unripe fruit as antimicrobial agents (unpublished reports). Nahdya (2018) found that *M. acuminate* leaves also have benefits in the medical field, because they are known to have antimicrobial and antioxidant activity. Banana leaves also contain flavonoids, tannins and alkaloids which can stimulate the healing process of burns (Nahdya, 2018). Sahaa et al. (2013) found that *M. sapietum* leaf has antimicrobial and antioxidant activity. Then based on research (Asuquo & Udobi, 2016) the ethanol extract of *M. paradisiaca* leaves and the water fraction have been investigated to have antibacterial activity, it is indicated has a potential anti-diabetic property (Kappel et al., 2013), antioxidant (Rani, 2017). A study by Palupi (2019) and Handayani et al. (2021) show that *M. balbisiana* leaf extract contains the most active antioxidant, and the highest phenolic and flavonoid content, when compared to *M. acuminata* and *M. paradisiaca*. The banana leaf is always a better option than other food wrappers, it is very healthy too. Merchant of Kepok's banana leaves is not as much Batu's banana leaves. The selling price of Kepok's banana leaves is cheaper than Batu's banana leaves. The results of the interview showed that banana leaves in the traditional market of Bogor city have a price of one bunch of about five thousand rupiahs. Each bunch has taken 12 to 15 stems of banana leaves.

***Phrynium pubinerve* Blume.**

Patat (*Phrynium pubinerve* Blume.), synonym *P. capitatum* Willd. (Ardiyani et al., 2010), included in the *Marantaceae* tribe and the genus *Phrynium* (Wawo & Sukamto, 2011). Habitus of

patat is an herb, form of its leaves widened and oval, the shape of the leaves is wide and oval, tall is about 1,5–2,2 m (Badar, 2006). These species are cultivated and their leaves are utilized for food wrapping in Indonesia (Heyne, 1987). Its leaves surface contains a cuticle and its content higher than banana leaves (Badar, 2006). Based on the results of phytochemical tests (Fathoni, 2021), patat leaf extract is known to contain alkaloids, steroids, triterpenoids, flavonoids, saponins, phenolic hydroquinone, and tannins. The content of compounds in patat leaves affects the effect of their use as food packaging materials.

The results of observation are known that traditional food in the Bogor city that utilizes leaves as its wrapping is merchant "tauge goreng" and "doclang". Tauge goreng is one of the unique traditional culinary in Bogor City that is serving vegetarians. It has tasteful that is made in by sauteing with a little hot water, added sliced tofu, a rice-based food (ketupat), yellow noodles, and thick sauce. While doclang is a typical traditional Bogor food found in Indonesia that has the composition contained in doclang, are lontong or pesor in Sundanese, fried tofu, boiled eggs, and fried steamed potatoes and bean spices as an additional. According to the merchant of tauge goreng and doclang stated that texture of *P. pubinerve* leaves is not easily ripped and its leaf surface contains a cuticle. It was caused a food which contained water safer. The price of *P. pubinerve* leaves in Bogor city's traditional market for 1 bunch consists of 8 leaves is two thousand rupiahs. Currently, the existence of *P. pubinerve* leaves it harder to find it on market, caused is not much local society who was cultivated it. It will be affected to continue on the price *P. Pubinerve* leaves that will be increased together with its scarcity. The community especially traditional societies, possesses indigenous wisdom and conservation ethics in the sustainable management of *P. pubinerve*. It is hoped that community participation in the management program will foster experiences and a sense of ownership, enhancing responsibility and willingness to preserve this *P. pubinerve*.

Gigantochloa spp.

The species diversity of bamboo in the world high enough, there are about 1439 species (Clark, 2012), while in Indonesia there are about 176 species (Widjaja, 2018). However, utilization of its leaves as food wrapping is not much known from its species. We are expected bamboo leaves of the genus *Gigantochloa* was utilized for food wrapping, caused its leaves size is large and lengthy. It has a long petiole, The flags on its bottom of the leaves surface are slight, smooth, its leaves color darker green than other species. Commonly bamboo leaves used to wrap bacang that is one of unique local food came from the mainland of China. This food is carried by China merchants to Indonesia. A producer bacang still maintained the inheritance of traditional culture through the utilization of bamboo leaves as traditional culinary wrapping. Research was conducted by Zhang et al. (2005), Mulyono et al. (2012), Dewi et al. (2014) known that bamboo leaves can be utilized as an antioxidant and antibacterial. *Gigantochloa* leaf extract has no antifungal activity against the growth of *Candida albicans* (Setyawan et al., 2018), and was detected positive for polyphenol, triterpenoid, flavonoid, saponins, alkaloids, and tannins (Sujarwanta & Zen, 2021). Moreover, the fiber and texture of bamboo leaves are rude, small, and not sticky. It can be a reason that bamboo leaves are utilized as traditional culinary wrapping, namely bacang and kue cang. Thus, bamboo leaves have a high potential to be added in the manufacture of food products.

Cocos nucifera L.

Cocos nucifera L. is a native tropical plant and can almost grow in all areas of Indonesia. It is plant species that all parts of the plant can be utilized for food, drink, medicine, household appliances, energy, and board so that it is called multifunction plants (Setiyanto, 2018). Young leaves of *C. nucifera* still common were utilized as wrapping some traditional food in Bogor. It is such as lepet and ketupat, while old leaves were utilized as wrapping palm sugar. The result of the interview known that coconut leaf has an advantage given a flavor and durable expired time on the food which it's wrapping. A study by Hasanah (2019) shows that from both fresh and steamed coconut exhibit antimicrobial and has antioxidant activity.

***Zea mays* L.**

Zea mays L. is a seasonal plant species that many were cultivated by society in Indonesia. This species has many high cultivars (Koopmans et al., 1996). Some areas in Indonesia, such as Madura, Nusa Tenggara Timur, and Sulawesi Selatan have dominated the dispersion of *Z. mays* and its seeds which be dried as substitute food rice (Amzeri, 2018). Stems and their leaves are utilized as animal feed. A rind of *Z. mays* (kelobot) is utilized as culinary traditional wrapping. The result of the chemical analysis showed that kelobot is a substance that has high water content and crude fiber (Pratiwi, 2014). Content of fiber is one of factor which supported utilization kelobot as food wrapping (Pratiwi, 2014). Based on the mechanic, kelobot is elastic material and solid material also has a lowly absorption (Pratiwi, 2014). It can be an extended expired time of the product (Pratiwi, 2014). Although its fibers are rude, however, it has the ability no easy to absorb water, so that is often utilized as wajik and dodol wrapping. Kelobot also was utilized as a given flavor. and the leaf wrapping only contained alkaloid compounds and antioxidant (Pangemanan et al., 2020).

Utilization of natural material as traditional culinary wrapping given a positive effect on around environment and consumers. It caused material that did not contain dangerous chemicals. it is easily founded, simple to be folded and given a delicious flavor to food (Wijaya et al., 2014). Utilization of leaves as traditional culinary wrapping can be conserved by the environment and nature, caused natural ingredients will be unraveled in the realm, so that environmentally friendly. Utilization of leaves as traditional culinary wrapping also can be an identity of culinary in certain areas. Therefore, the utilization of leaves as traditional culinary wrapping needs to be improved to reduce the volume of plastic bags. Moreover, it can be maintained local knowledge, so not easy to extinct. It is expected to conserve a diversity of plants that has economic value.

CONCLUSION

The use of plant diversity as traditional culinary packaging in the city of Bogor can still be found; this is based on 20 respondents at the research location. A total of 23 types of traditional culinary delights that use plants as wrapping are found in the Anyar/Kembang, Sukasari, and Surya Kencana markets in Bogor city. The diversity of plant types, namely 5 plants, is used as packaging material, consisting of leaves (4 types) and fruit skin (1 type). Wrapping leaves come from the leaves of banana (*Musa* spp.), patat (*Phrynium pubinerve* Blume.), bamboo (*Gigantochloa* spp.), and coconut (*Cocos nucifera* L.). Meanwhile, the wrapping that comes from fruit skin is corn (*Zea mays* L.).

Banana leaves are plant that is the most widely used for traditional culinary wrapping. Meanwhile, the natural wrapper that is most difficult to find is patat leaves because the price is relatively expensive and few are available on the market. The diversity of wrapping leaves is utilized to provide flavor, food security against expiry date, antioxidant, antibacterial, and aesthetic value.

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