

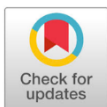
Ethnoagriculture of Cirendeu Traditional Village, Cimahi, West Java: Local Knowledge Implementation on Agricultural Practices

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Abstract

Cirendeu Traditional Village (*Kampung Adat Cirendeu*) is a unique village located in Cimahi City, West Java. This village is the house to the traditional community that make use of local or traditional knowledge to maintain their natural resources. They are well known to consume cassava rice ("*rasi*", abv. *beras singkong*) as staple food. They also have strict traditional rules regarding spatial management in land usage. This paper aims to explain the ethnoagricultural aspects of Cirendeu's traditional community, to determine the strengths and weaknesses of their practices, and to suggest further action to their common problems. The methods used are literature reviews from various scientific sources. From the reviews, Cirendeu's traditional community ethnoagriculture aspects are shown by the integration of traditional rules to determine land use and producing agricultural crop and implement sustainable agriculture. While their tradition helps them self-fulfill their daily lives, this community also faced several threats from the outside, such as housing development and long term effect from Leuwigajah Final Land Disposal. These results suggest the needs for further studies on these long term effects and outside influence to help Cirendeu's community preserving their heritages.

Keywords: Agriculture, rasi, spatial management, sustainable agriculture, traditional knowledge

Introduction

The indigenous people in Cirendeu Traditional Village live by adhering to the guidelines to take advantage of the limitations to survive. The guideline says in Sundanese: "*teu nyawah asal boga pare, teu boga pare asal boga beas, teu boga beas asal bisa nyangu, teu nyangu asal bisa dahar, teu dahar asal kuat*," in the essence that we should be grateful of what we have; has been inherited from the predecessors of the previous generation of Cirendeu indigenous peoples since the village was founded around the 1920s.¹ The essence of this guideline is to use what is available in nature to survive. This guideline has been passed down from generation to generation and implemented by the Cirendeu Indigenous people to use the natural resources in their area wisely.

The guidelines came from the location characteristic of the village itself. The most significant factor



is that the soil is not suitable for planting rice paddy, the most common staple food in the area. Therefore, the Cireundeu Traditional Village makes cassava (*Manihot esculenta*) their staple food.² The struggle of the Cireundeu indigenous people to fulfill their daily needs did not stop there. Based on testimonies from the Cireundeu indigenous people, cassava contains toxic properties, so it needs to be processed using specific methods until it can be consumed safely. From these issues, Cireundeu indigenous people processed the cassava into *rasi*, an abbreviation of *beras nasi*, a literal translation of cassava rice. Due to this process, cassava can be consumed safely and has texture characteristics and forms like a grain of rice. The way of processing the cassava into *rasi* eventually became the identity of the Cireundeu Traditional Village, and after that, this village became widely known.

The limitations of land use encouraged the founders of the Cireundeu Traditional Village to innovate in managing their natural resources, emphasizing a local wisdom that adapts to the conditions of the Cireundeu Village area. This local wisdom is how cassava is processed into *rasi* or cassava rice. The founders of Cireundeu Traditional Village had found a particular variant of cassava that could produce optimal yields. Although the Cireundeu Traditional Village is known to consume cassava as a staple food, other local wisdom is held by Cireundeu indigenous peoples. Every activity by the Cireundeu indigenous people from managing plantations, processing cassava, and arranging the yearly traditional ceremonies that contain many philosophies and implement the guideline.

Cireundeu Indigenous peoples' philosophies are deeply integrated into their daily life. From agricultural practices to protecting the land, they all have some spiritual connection to nature and God. Every year they held a ceremony called "Upacara Adat Tutup Taun Ngemban Taun 1 Sura" (i.e. a new year's eve celebration based on the Sundanese calendar) as a form of gratitude to God for the gift of plentiful harvest that fulfilled their needs.³⁻⁵ Other than that, the specific ritual including the agricultural ritual conducted in Cireundeu Traditional Village regarding the agricultural activity. Moreover, Cireundeu indigenous people divide their land usage based on their elder's guidance. Some areas are highly restricted and cannot be entered by anyone, called *leuweung larangan* or literal translation of forbidden forest. This area has conservation aspects where the very top of Cireundeu's land cannot be used and should be kept as pristine as possible, so this may help protect biodiversity, ecological processes, and water availability in the area, where some areas are available to carry out an agricultural process called *leuweung baladahan* or agricultural land.

The relationship between humans with the environment in agricultural practices can be categorized as ethnoagriculture. According to Karnaraja & Natarajan,⁶ ethnoagricultural knowledge is an accumulation of information and behavior of agricultural practices without disturbing the natural resources and environment. The indigenous people usually implement ethnoagricultural practices in the environment to enhance social and cultural beliefs.

This review article aims to explain the traditional sustainable agricultural practice in Cireundeu Traditional Village. The second part is to analyze each problem and challenge this community faced to keep its traditional values. This paper could create awareness in the scientific community, perhaps even the general public to understand the value of Cireundeu's local knowledge and traditional heritages then may help other communities to tackle the similar threats.

Materials and methods

This study was carried out in Cireundeu Traditional Village, Cimahi City, West Java, in May–December 2022.



Figure 1. Location of study, Cireundeu Traditional Village, Cimahi City, West Java (Personal documentation).

This research was carried out through literature reviews using scientific papers and post-graduate theses as information resources about the agricultural activities in Cireundeu Traditional Village. Some of the keywords on Google Scholar that were used are: “ethnoagrikultur”, “ethnoagriculture”, “kampung adat cireundeu agrikultur”, “kampung adat cireundeu pertanian”, “kampung adat cireundeu pertanian”, “Cireundeu”. In addition, an open interview with an informant named Mr. Entri, an organizer of Cireundeu Traditional Village was conducted regarding the traditional agricultural practices in Cireundeu Traditional Village. Results from scientific papers, post-graduate theses and interviews were compiled to explain the traditional agricultural practices in Cireundeu Traditional Village.

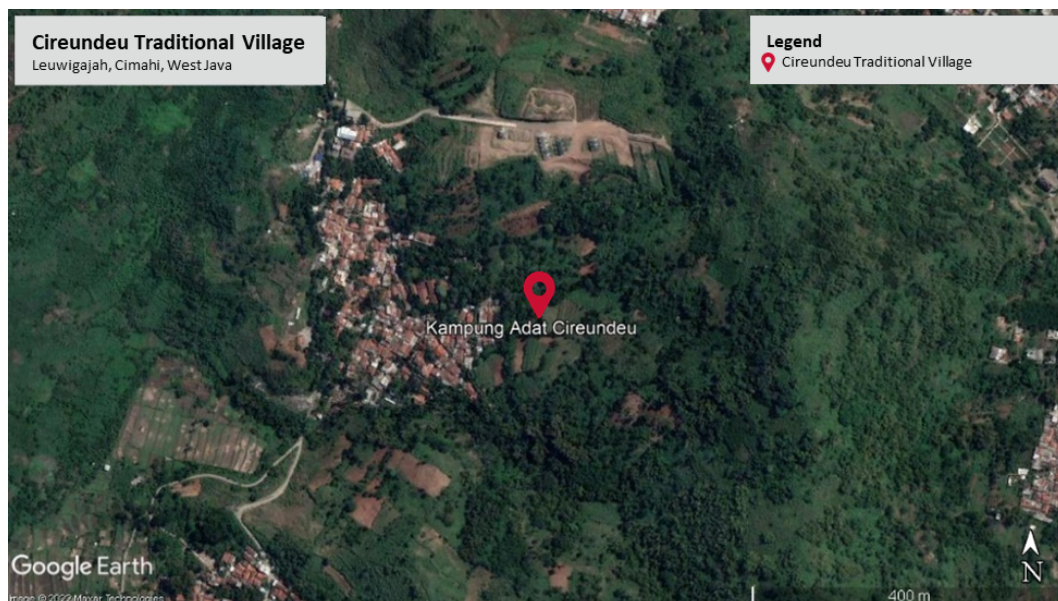


Figure 2. Map of Cireundeu Traditional Village, Cimahi City, West Java. (Google Earth,

Results

Agricultural Crop Commodities

Since cassava has become a staple food in Cireundeu Traditional Village, for sure cassava is the most planted crop here. Not only cassava, other crop plants such as peanuts, (*Arachis hypogaea*), scallion (*Allium fistulosum*), ginger (*Zingiber officinale*), aromatic ginger (*Kaempferia galanga*), and turmeric (*Curcuma longa*), taro (*Colocasia esculenta*) are also planted by Cireundeu indigenous people in order to fulfill their daily needs⁴. Besides, Cireundeu indigenous people also planting fruit plant such as banana (*Musa paradisiaca*), papaya (*Carica papaya*), and jackfruit (*Artocarpus altlis*)⁷. The more explanation about these crop commodities on their plantation land will be explained later in the following sub-chapter.

Land Usage Categorization

The Cireundeu Indigenous people have their own spatial management then categorize land usage based on particular utilization. According to Tahnia,⁴ there are three categories of land usage in Cireundeu Traditional Village: 1) *leuweung baladahan* or agricultural land, 2) *leuweung tutupan* or the secondary forest, 3) *leuweung larangan* or the forbidden forest. *Leuweung baladahan* or agricultural land is located above the residential area of the Cireundeu Indigenous People which has the aim of food production. This area consists of several plantation land of several agricultural crop commodities the like of *kebon sampeu* or cassava plantation, *kebon taleus* or taro plantation, *kebon gajahan* or elephant grass plantation, and *kebon awi* or bamboo plantation.

Cassava plantation is a land to produce cassava (*M. esculenta*) as their staple food crop. The cassava plantation in the Cireundeu Traditional Village is owned by each household. The agricultural management system of the indigenous people in the Cireundeu Traditional Village applies a crop rotation system. Due to that crop rotation system, cassava can be harvested multiple times in a year.⁶ Therefore, there will be no great harvest time because the harvest time in each plot of the plantation will not occur at the same time. Because of the implementation of this crop rotation system, the Cireundeu Traditional Village can fulfill the basic food needs every year. According to Mr. Entri (personal communication), this system also makes the cassava can be harvested every month.

In the first three months of planting cassava, the Cireundeu indigenous people also plant other crop plants simultaneously. This is applied in order to get a productive commodity such as peanuts (*Arachis hypogaea*) that can be harvested during the first three months. Some plants like scallion (*Allium fistulosum*), ginger (*Zingiber officinale*), aromatic ginger (*Kaempferia galanga*), and turmeric (*Curcuma longa*) which are used as cooking spices are also planted. Beside those plants, the elephant grass is also planted for livestock feed and located at the edge of the *leuweung baladahan*. For the yields, 1 tumbak (i.e. a traditional unit area equally 14 m²) can produce a ton of cassava which is converted as a quintal of *rasi*.⁴



Figure 3. Cassava plantation at Cireundeu Traditional Village (Personal Documentation).

The taro plantation which produces taro (*Colocasia esculenta*) is utilized as a complementary food ingredient. The taro garden is located in *leuweung tutupan* and the bamboo plantation. This plant can grow in shaded and dense locations like those two locations. The leaf litter from the trees in *leuweung tutupan* and the bamboo plantation enriches the soil indirectly. The taro in this land can also grow naturally. The harvesting time for taro is around 5-6 months.⁴

The elephant grass plantation which produces elephant grass (*Pennisetum purpureum*) is intended for livestock feed, such as goats. For information, some of Cireundeu indigenous people also have goats as livestock, other than farming. Elephant grass that grows in this area is exposed to a lot of sunlight and will still grow even without any particular treatment. In addition, this plant can grow quickly in just two weeks. In other words, the harvesting time of elephant grass occurs every two weeks. However, elephant grass can fulfill the livestock needs every day throughout the year. Even in the dry season, this plant can still grow well.⁴

The bamboo plantation which is still part of the *leuweung baladahan*, comprised many bamboos species (*Bambusa* spp., *Dendrocalamus* sp., *Gigantochloa* spp., *Schizostachyum* sp.) can be considered as the widest plantation area which is ranged from the middle of the *leuweung baladahan* to the edge that is bordered with *leuweung tutupan*. The bamboo plantation also portrays one of the important roles and functions as a water conservation then to absorb precipitation. In this bamboo plantation is also planted with taro. In Cireundeu Traditional Village there are found very diverse bamboo species such as awi bitung (*Dendrocalamus asper*), awi haur (*Bambusa vulgaris*), awi wulung (*G. atrovilacea*), awi lengka, awi tali (*Gigantochloa apus*), awi tamiang (*Schizostachyum blumei*), and awi temen (*G. atter*).⁴

Leuweung tutupan or can be considered as a secondary forest is a land located above *leuweung baladahan*. This *leuweung tutupan* has a role as a traditional conservation, regulator of water resources (water conservation), to buffer the protected areas known as *leuweung larangan* or forbidden forest and the plantation area. *Leuweung tutupan* is directly bordered to *leuweung baladahan* and *leuweung larangan*.

Leuweung tutupan is divided into two segments, mixed-species land and monoculture land. The mixed-species land consists of forest tree species such as mahogany (*Swietenia macrophylla*), puspa (*Schima wallichii*), kuray (*trema orientalis*), etc. Other than forest tree species, here can be found fruit trees species such as matoa (*Pometia pinnata*), campolai (*Pouteria champeiana*), jackfruit (*Artocarpus altilis*), etc.⁴

Because it is still part of a traditional conservation area and water resources regulator, the collection of plants from this *leuweung baladahan* must comply with applicable traditional regulations. For example, in utilization for daily life, in mixed-species land is only allowed to seek for material as a source for firewood that comes from plant parts like branches, twigs and stalks that have fallen or from dead plants. In monoculture land is planted by forest tree plants such as teak (*Tectona grandis*), pine (*Pinus merkusii*), mahogany (*Swietenia macrophylla*) when the planting distance is so close and in groups⁴. These forest trees have ecological functions as erosion and landslide prevention, water resource regulators, etc.

Last, *Leweung larangan* or the forbidden forest, in which no one including the elders or leader of Cireundeu Traditional Village is able to enter this land. *Leuweung larangan* is the most sacred land in the Cireundeu Traditional Village. The limit distance for approaching this land is approximately 10 meters before the *leuweung larangan*. *Leuweung larangan* has an ecological function as a regulator and absorption of groundwater similarly as a water conservation. Cireundeu Indigenous People believe and are aware that it is important to preserve nature for the future. In *leuweung larangan*, there are numbers of tree species that grow, such as needlewood tree (*S. wallichii*), Malayan yellowwood (*Dacrycarpus imbricatus*), African tulip tree (*Spathodea campanulata*), palm (*Areca catechu*), coconut (*Cocos nucifera*), and sugar palm (*Arenga pinnata*). This area is not interfered with by humans, so that the sustainability of the ecosystem and the growth of plants or even wildlife takes place naturally on their own.⁴ Cireundeu Indigenous people are aware that the future generations like their children and great-grandchildren generation will be affected by environmental damage if they are not doing something to care for the environment from now on. Disasters that can occur such as drought, erosion, landslides, etc.

Agricultural Practices Based on Local Knowledge

The Cireundeu Traditional Village is also known for its particular agricultural practices. Whereas most areas in West Java cultivate paddy rice as the source of staple food, the traditional community of Cireundeu village use cassava as their primary carbohydrate intake.⁷ The reason their community mainly relies on cassava can be traced back to the location of the village. At the time of its founding, Cireundeu Traditional Village was located in a somewhat isolated area far from the main road. Their location prohibited them from efficiently trading resources with other villages, thus the need for fulfilling their needs by utilizing resources available locally.

The second problem faced by the initial Cireundeu indigenous people is the soil types and fertility. The soil consists of latosol and red and yellow podzolic soil type, coupled with the hilly topography of the areas surrounding the village made it difficult to plant rice paddy. Fortunately, some cultivars of cassava could thrive in this type of land, such as *karikil (kastape)* and *mangi*.⁹ However, other sources mention *garnawis* cassava is being used as a local food source.¹⁰ Further analysis is needed on the soil condition at Cireundeu agricultural field to determine accurate measurements of the soil fertility.

The types of cassava grown in Cireundeu are the main reason the initial settlers developed *beras singkong (rasi)*. The cultivars mentioned before have notable characteristics such as bitter flavor and are generally difficult to consume when cooked using conventional methods. The process to make *rasi* is called "*nyampeu*". *Rasi* is made by ground-up cassava root, then the pulp is washed several times using water and dried under the sun. The final product from this process has a texture similar to that of paddy rice, and can be cooked like one. With this processed cassava, not only is it made to be edible, but also has a more familiar flavor akin to steamed paddy rice. Mrs. Omah Asnamah introduced this method circa 1924, one of the regarded and well-respected community members at that time.¹⁰ To ensure cassava supplies are fulfilled every month, the community also has a specific guide for managing its agriculture production. Utilizing a mix of crop rotation and scheduling for each family's plot ensures cassava production is available throughout the year.²

Rituals and Beliefs on Agricultural Practices

Cireundeu Traditional Village also maintains and inherits some rituals or traditional ceremonies as a traditional village. One of these rituals is an agricultural ritual. According to Tahnia,⁴ the agricultural ritual is conducted during the activity of cassava pre-harvest. The offerings (re: *sesajen*) called *rujukan* which are comprised of various plants species such as jasmine (*Jasminum sambac*), rose (*Rosa hybrida*), coconut (*Cocos nucifera*), banana (*Musa acuminata*), coffee (*Coffea arabica*), tamarind (*Tamarindus indica*), and betel (*Piper betle*) are brought to the cassava plantation and presented to '*Pwah Aci Sanghyang Asri*' i.e. the spirit which lives inside the plants, either be consumed or not, such as shoots, leaves, flowers, fruits, and tubers. Those plants in *rujukan* have a philosophical or cultural meaning as a symbol of hope.

Through personal communication, Mr. Entri stated there are some beliefs during agricultural practices in Cireundeu Traditional Village. Cireundeu indigenous people believe that if armed weed plants are growing on their plantation land, the soil might be saturated, or in other words, the soil is infertile. Thus, fertilizing the soil is necessary. If the land plantation is grown by vine plants, it means the soil on the plantation land is believed to recover from its saturated condition. The Cireundeu indigenous people believe those vine plants are a mechanism of soil detoxification which previously contaminated by toxic compounds.

According to Mr. Entri, another belief that implemented in Cireundeu Traditional Village is every person who enter the plantation land, particularly the cassava plantation must take off his/her shoes or sandals. So, entering the cassava plantation land with barefoot is a must in here.

Challenges and Drawbacks

Cireundeu indigenous people are often used as a case study for heritage conservation due to its continuous effort to preserve the local tradition. Their approach to land use, resource management, and agricultural practices can be an example of sustainable development. Theoretically, this could allow the community to live in harmony with nature and create a minimal negative environmental impact.¹¹ The inherited tradition of consuming cassava from their agricultural field also can reduce dependency on

imported food sources and generally create less green gas emissions since they do not need to transport the food with a motorized vehicle.

While initially Cireundeu Traditional Village is isolated from outside communities, modern-day Cireundeu has opened themselves to the surrounding areas. This development made it easier for the traditional community to interact with outsiders, and open to trade with other villages. Nevertheless, based on account of Cireundeu's indigenous people, the village is threatened by commercial housing development. Through personal communication with Mr. Entri, a well-known figure of the traditional community, there has been a report of water shortage since the development of sub-urban housing on the outskirts of the village. Furthermore, the sub-urban development almost reached the *leuweung larangan*, considered sacred to the locals. The community also believes this housing development contributes to the water supply issue in the village.

Water is also crucial for processing cassava into *rasi*. Based on the report from Primasongko,⁸ LCA analysis showed the total amount of water usage when processing cassava could reach around 0,9 L per 1,5 kg cassava with an output of 0,3 kg of *rasi*. The issue of water availability in the village could threaten one of the core traditions of Cireundeu Traditional Village. Fortunately producing the cassava at the field can rely on rainwater, thus removing the need to use water from the village reservoir. Modern Cireundeu settlers also began to utilize more modern tools such as pulping machines to help grind the cassava efficiently in large numbers. This type of machine using a simple diesel engine emits greenhouse gas. However, with the community only using a single small-scale machine, the emissions from the process are still minimal.

Other problems that Cireundeu Indigenous people face are the Leuwigajah Final Disposal Landfill (TPA) situated on the outskirts of the village. While the landfill is now closed for operation due to the garbage dump erosion in 2005, an incident that resulted in around 147 lives lost, the impact might still affect the area decades after the closing of the landfill operation.¹² While the locals today do not feel any foul odor since the landfill is closed, they still worry about the long-term effect on the groundwater and heavy metal leakage into the surrounding environment. Studies suggest the groundwater quality in Cireundeu is safe years after the landfill closing; several environmental parameters are indicated three years after the incident. The indicators measured are color, opacity, Nitrite (NO₂-N), Zinc (Zn), Sulfide (H₂S), Phenol, BOD, and COD, which exceeds the maximum safety standard of the time.¹³ This indicator might differ today, but further studies should be conducted to measure the landfill impact in the long term to prevent harmful effects on the surrounding environment, especially for Cireundeu community that is utilizing their land for agricultural activities.

Another problem faced by the community is the size of the actual indigenous community itself. Cireundeu village is often called "*kampung adat*" thanks to the well-known traditional community, but the community itself only contains around 160 people with the rest of the total of village settler of around 1233 people in 2011. The local food production is considered sufficient for the traditional community, but it is not sufficient enough to fulfill the needs of other communities in the village. This is the reason why the village is still importing food from the outside, mainly from the local market in Leuwigajah area.⁹

Additionally, the recent issue of Global Covid-19 Pandemic resulted in the village being closed to the public to contain the spread of the virus. This blockade mostly affects their tourism activity by forbidding visitors to enter the village. For example, the village annual traditional ceremony such as *Upacara Satu Sura* is now limited only to the traditional community and several invitees from government representatives. Fortunately, the impact from this pandemic in the village is rather minimal and soon after 3 months of blockade the village is already open to the public once again.¹⁴

Discussion

Potential of Ethnoagriculture Practice as Food Diversification and Security

Cireundeu's traditional culture is related to how they utilize and maintain the natural resources of their village. Their local knowledge and heritage have great potential as a case study on utilizing natural resources while keeping a minimum negative impact on the local environment. Integrating local knowledge, beliefs, and spiritual teaching into their daily lives might help the traditional Cireundeu indigenous people survive for decades since the village's founding. Nowadays, the community is opening themselves to visitors who eager to learn their culture, giving insight to outsiders on how Cireundeu indigenous people uses their culture to fulfill their daily needs without being too reliant on resources from outside the village.¹⁵ The community beliefs their cultural value is not exclusive to their own, but it can be applied to daily lives for the society themselves.¹⁶ Unlike most traditional communities in West Java, Cireundeu's community is not isolated from modernization. While there's just a few remaining members from the traditional community, the effort to educate people to the core value might help preserve the tradition and local wisdom in modern time.¹⁷

The usage of cassava (and the processed cassava rice or *rasi*) as a main staple food could potentially help diversifying food to ensure food security. In the case of Cireundeu village, this community-based food system helps them overcome food problems at community level. This specific habit could be researched further to help diversify food sources at national level, presumably creating alternative to common paddy rice that can be produced at less fertile agricultural land.¹⁸

Issues and Challenges of Final Disposal Landfill on Ethnoagriculture Practice

While more people are aware of the village's tradition, Cireundeu Traditional Village faces yet another challenge in modern times. The long-term effects of Leuwigajah Final Disposal Landfill could still affect the surrounding environment. This landfill having many effects to the Cireundeu's community, thus encouraging them into taking action to improve their life's quality through creating awareness to the masses. This effort started with the campaign to prevent the landfill being reactivated by the government, and fortunately most of society's elements ended up supporting the village. This awareness campaign evolves into the development of tourism in the village that might help the existence of the village.¹⁹

Another factor is most of Leuwigajah Area, including Cireundeu Traditional Village, is categorized as urban area and now subject to agricultural land loss and land function conversion into settlements, industrial area and other commercial function.¹ With the loss of agricultural land surrounding the Cireundeu Village, the locals suspect this might be the reason for their lower water availability and

quality.⁸ Land sustainability should be the priority since the main profession of their community is agriculture, also their reliance on local harvest for daily lives.²⁰

Ethnoagriculture Practice Development as Agrotourism, Agroindustry, & Agribusiness

Many of local knowledge that implemented in Cireundeu Traditional Village come from agricultural aspects such as consume cassava as staple food with some beliefs and rituals on agricultural practices. From this, there are some aspects that can be developed as agrotourism, agroindustry, and agribusiness,²¹ even gastronomy tourism.²² Research carried out by Dasipah *et al.*,²¹ in interview with 30 respondents of which Cireundeu Traditional Village's visitors, it showed that 43% of them want to try rasi and know Cireundeu's cultural, then 27% of them want to know the process of making rasi, and 2% for recreation. Rasi as Cireundeu Traditional Village main product of their agroindustry actually becomes the foremost reason on why visitors come to Cireundeu Traditional Village as well as the cultural activity since some of rituals or ceremonies could also be attended by people outside Cireundeu. After that, besides want to try the taste of rasi, people outside Cireundeu Traditional Village who come as visitors also wondering how to make rasi, from a raw cassava which is made as grain like paddy rice. Cireundeu indigenous people also produce other processed products which are derived from cassava or rasi such as cassava chips, cookies, pastel, egg-roll, and cheese stick.^{23,24} These products are well-managed by Cireundeu Traditional Village – Small and Medium Enterprise start from the production, package, and marketing. However, these agricultural derived from the cassava products can also be attraction for visitors to visit and recreation in Cireundeu Traditional Village.

According to Utari,²² Cireundeu Traditional Village has potential to develop the gastronomy tourism, based on three elements, food, culture, and history. As a traditional village, Cireundeu Traditional Village has unique and specific cultures regarding agriculture and food that came from a long history. On food elements, unlike other villages in Indonesia, Cireundeu Traditional Village consume cassava which is processed as rasi and then produce some food products to be marketed. Wondering how the taste of rasi including the way of its processing and then the derived products of cassava, could be one of attraction in tourism aspect. On cultural element, Cireundeu indigenous people still conduct some ritual ceremonies which one of them regarding an agricultural aspect, and the other one about "Upacara Adat Tutup Taun Ngemban Taun 1 Sura that can be attended by visitors. Considering those aspects with their local knowledge, Cireundeu Traditional Village can be developed as the area for agrotourism, agroindustry, and agribusiness sectors.

Future Prospectives and studies of Ethnoagriculture Practice

Further extensive studies are needed to understand this concern faced by the Cireundeu indigenous people. We suggest that researchers study the village's land usage, water availability, and quality, including the assessment and possibilities of tourisms. These studies are needed to help the Cireundeu community preserve their tradition, and potentially adapt their natural resource management to other areas with similar conditions to Cireundeu.

Conclusions

Cireundeu indigenous people has rich local knowledge on how to maintain the natural resources that are available locally. This made the community less reliant on outside influence and more self-dependent on fulfilling their needs. The local knowledge is integrated into their land usage and agricultural practices, and involves their life aspects such as utilizing cassava as their main staple food. This unique heritage has challenges, with the urbanization of surrounding areas and the long-term effect of Leuwigajah Final Disposal Landfill, creating some concern about the sustainability of the Cireundeu's tradition. The internal and external threats should be studied carefully to understand the extent of their impact on Cireundeu's natural resources and environment. This study could help the locals preserve their traditions and even be implemented in other areas so more villages can fulfill their daily needs through local resources.

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Conflicts of Interest

The authors state that there is no conflict of interest.

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