

Documenting the Rice Lexicon of the Dayak Ngaju Language: An Ethnolinguistic Study for Preserving Indigenous Knowledge and Cultural Heritage in Central Kalimantan

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ABSTRACT

Background: The rice lexicon of the Dayak Ngaju language represents not only agricultural vocabulary but also indigenous ecological knowledge and cultural heritage that are increasingly vulnerable to language shift and changing agricultural practices. Despite its cultural significance, systematic documentation of rice-related lexical items in the Dayak Ngaju language remains limited. **Aim:** This study aims to document the rice lexicon of the Upper Katingan variety of the Dayak Ngaju language and to analyze the lexical and cultural meanings embedded in these lexical items through an ethnolinguistic approach. **Method:** Employing a descriptive qualitative design, the research was conducted in Tumbang Sanamang, Tumbang Jiga, and Tumbang Kanja villages, Katingan Regency, Central Kalimantan. Data were collected from six native speakers, including farmers, community leaders, and a Damang (customary leader), through semi-structured interviews, field observations, and documentation. The documented lexical items were transcribed using the International Phonetic Alphabet (IPA) and analyzed through ethnolinguistic interpretation supported by field evidence. The study documented nine rice-related lexical items: binyi, parei, kajugu, eta, apis, bunyer, bulu, behas, and kenta. **Result and Discussions:** The findings reveal that these lexical items form an interconnected lexical system representing the traditional rice cultivation cycle, from seed selection and cultivation to harvesting, post-harvest processing, and food preparation. Beyond their lexical meanings, the documented lexicons encode indigenous agricultural knowledge, sustainable resource management practices, ritual traditions, and culinary heritage that continue to shape the cultural identity of the Dayak Ngaju community. The integration of phonetic documentation, lexical analysis, and ethnolinguistic interpretation demonstrates that documenting culturally specific vocabulary contributes not only to regional language preservation but also to safeguarding indigenous knowledge and intangible cultural heritage. The findings provide valuable resources for language documentation, revitalization programs, cultural education, and future digital documentation of the Dayak Ngaju language.

Keywords: Dayak Ngaju Language, Language Documentation, Ethnolinguistics, Rice Lexicon, Indigenous Knowledge, Cultural Heritage.



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INTRODUCTION

Regional languages constitute an essential component of a community's cultural identity. Beyond serving as a means of communication, language functions as a repository of local knowledge, cultural values, historical experiences, and collective worldviews. However, the increasing influence of globalization, urbanization, and the dominance of national and foreign languages has contributed to the declining use of many regional languages in Indonesia. This phenomenon threatens not only the survival of these languages but also the traditional knowledge systems embedded within them.

According to *Ethnologue* (Eberhard et al., 2024), the Dayak Ngaju language is spoken by approximately 890,000 speakers, making it one of the largest regional languages in Central Kalimantan. Nevertheless, ongoing urbanization, population mobility, and the predominance of Indonesian in

educational institutions and public domains may affect the intergenerational transmission and continued use of the Dayak Ngaju language among younger generations. This situation underscores the importance of language preservation efforts as an integral part of safeguarding the cultural identity of the Dayak Ngaju community.

The Dayak Ngaju language is one of the indigenous languages spoken by Dayak communities in Central Kalimantan. It plays a significant role not only as a medium of communication among Dayak Ngajus speakers but also as a lingua franca among various Dayak ethnic groups in several regions of Central Kalimantan. Despite its continued use, ongoing social and cultural transformations have contributed to the gradual decline of traditional vocabulary, particularly lexicons associated with customary practices and natural resource management.

One manifestation of the linguistic richness of the Dayak Ngaju language can be found in the terminology related to rice cultivation and traditional farming systems. For the Dayak Ngaju people, rice is not merely regarded as a staple food source; it also embodies social, cultural, spiritual, and ecological significance. Consequently, various stages of the rice cultivation cycle are represented by specific lexical items that reflect the community's indigenous knowledge of the environment and traditional agricultural practices.

The existence of rice-related vocabulary, hereafter referred to as the "Bahasa Padi," demonstrates the close interrelationship between language, culture, and food security within Dayak Ngaju society. Each term encapsulates valuable information concerning cultivation techniques, rice varieties, land preparation processes, harvesting activities, and the customary rituals associated with agricultural practices. Therefore, the loss of these lexical items would not only diminish the linguistic richness of the Dayak Ngaju language but also result in the erosion of traditional knowledge that has been transmitted across generations.

On the other hand, agricultural modernization, shifts in occupational patterns, and the decline of traditional farming practices have caused many rice-related terms to become increasingly unfamiliar to younger generations. This condition poses a significant challenge to the preservation of the Dayak Ngaju language, particularly in the domain of cultural lexicons associated with traditional agriculture.

Previous studies on the Dayak Ngaju language have primarily focused on its phonological, morphological, and sociolinguistic aspects. However, research specifically documenting rice-related lexicons as an integral part of Dayak Ngaju cultural knowledge remains relatively limited. In fact, language documentation constitutes one of the most important strategies for sustaining regional languages and preserving the local knowledge embedded within them.

Given these circumstances, research on the documentation of the "rice language" in the Dayak Ngaju language is necessary as an effort to inventory, preserve, and transmit the linguistic and cultural knowledge of the Dayak Ngaju people to future generations. Such documentation is expected to serve as a valuable source of information for local communities, researchers, and policymakers in supporting regional language preservation programs and strengthening local cultural identity. Furthermore, the documented rice lexicons may be utilized as culturally responsive learning resources in elementary education.

Although previous studies have examined the Dayak Ngaju language from phonological, morphological, and sociolinguistic perspectives, systematic documentation of rice-related lexicons remains very limited. Existing studies also pay little attention to the cultural meanings embedded in agricultural vocabulary and their role in preserving indigenous ecological knowledge. Consequently, the relationship between language documentation, cultural heritage, and indigenous knowledge in the Dayak Ngaju community has not been comprehensively explored.

Unlike previous studies that primarily describe linguistic forms, this study integrates language documentation

with ethnolinguistic analysis to demonstrate how rice-related lexicons encode indigenous ecological knowledge, cultural values, food security practices, and the worldview of the Dayak Ngaju people. Therefore, this research contributes not only to regional language preservation but also to safeguarding intangible cultural heritage.

Based on the background outlined above, this study aims to: **(a)** identify rice-related vocabulary in the Dayak Ngaju language, and **(b)** describe the cultural meanings embedded in each lexical item.

Regional Languages as Cultural Heritage and Repositories of Local Knowledge

Language is a fundamental component of human life that functions not only as a means of communication but also as a medium for storing and transmitting cultural knowledge across generations. From the perspective of contemporary linguistics, language is viewed as a representation of the collective experiences of a community, reflecting its ways of thinking, value systems, and relationships with both social and ecological environments (Sharifian, 2017). Furthermore, language serves as a repository of cultural conceptualizations that are transmitted from one generation to another (Sharifian, 2024). Consequently, the loss of a language signifies not only the disappearance of a communication system but also the erosion of the local knowledge embedded within it.

Indonesia is widely recognized as one of the most linguistically diverse countries in the world. According to *Ethnologue*, Indonesia is among the nations with the highest number of languages globally. However, the forces of globalization, urbanization, population mobility, and the dominance of national and foreign languages have contributed to a decline in the number of speakers and functional domains of many regional languages (Lewis et al., 2023). This situation has prompted various initiatives aimed at preserving regional languages through documentation, revitalization, and the strengthening of language functions across different spheres of social life.

Within indigenous communities, language occupies a broader role than merely serving as a communication tool. It functions as a medium for transmitting cultural values, customary practices, belief systems, and ecological knowledge that have evolved through long-term interactions between humans and their environment (Berkes, 2018). Therefore, the preservation of regional languages cannot be separated from efforts to sustain the cultural continuity and identity of their speech communities.

The Dayak Ngaju language is one of the indigenous languages that plays a significant role in the lives of Dayak communities in Central Kalimantan. In addition to serving as the mother tongue of the Dayak Ngaju people, it functions as a lingua franca among different Dayak ethnic groups in several regions of Central Kalimantan. The existence of the Dayak Ngaju language reflects a rich cultural heritage and a vast body of local knowledge transmitted across generations. One

manifestation of this richness can be observed in the vocabulary associated with traditional agricultural systems, particularly rice cultivation as the primary source of sustenance for the community.

Language Documentation as a Strategy for Preserving Regional Languages

Language documentation is one of the most widely adopted approaches in efforts to preserve regional and endangered languages. Himmelmann (2006) defines language documentation as the process of creating comprehensive and enduring records of language use across various social and cultural contexts. Language documentation encompasses not only grammatical and phonological aspects but also language practices, oral traditions, and the cultural knowledge embedded within the language.

Austin and Sallabank (2022) argue that language documentation serves two primary purposes: providing linguistic archives for academic research and supporting speech communities in maintaining and revitalizing their languages. Consequently, language documentation extends beyond academic interests and carries significant social and cultural dimensions.

Over the past few decades, language documentation has undergone substantial development with the advancement of digital technologies. Various forms of documentation, including audio recordings, video recordings, digital dictionaries, online glossaries, and multimedia archives, have become essential tools in language preservation efforts (Sallabank, 2021). The use of digital technologies enables linguistic data to be stored more securely and made accessible to wider audiences.

Language documentation becomes particularly important in relation to languages that contain culturally and environmentally specific vocabularies. Many traditional terms are gradually falling out of use due to social change and are therefore at risk of disappearing from community usage. Under such circumstances, documentation serves as a strategic means of safeguarding the local knowledge encoded in language.

In the present study, language documentation focuses on the inventory and description of rice-related terminology in the Dayak Ngaju language. Such documentation is expected to contribute not only to language preservation but also to the transmission of traditional agricultural knowledge to younger generations.

Ethnolinguistics and the Relationship Between Language and Culture

Ethnolinguistics is a branch of linguistics that examines the relationship between language and the culture of its speakers. According to Palmer (2017), language cannot be separated from the cultural experiences that shape the ways people think and behave. Every linguistic element, including

vocabulary, contains cultural meanings that reflect the social realities of the community in which it is used.

From an ethnolinguistic perspective, language is viewed both as a product of culture and as an instrument for preserving and transmitting cultural knowledge. In this framework, the vocabulary employed by a community reflects the knowledge, experiences, and values considered significant in everyday life (Duranti, 2017).

Sharifian (2017) explains that the cultural concepts embedded in language are known as cultural conceptualizations. These conceptualizations emerge from the collective experiences of a community over extended periods and are transmitted through daily language use. Consequently, the loss of specific lexical items may result in the loss of important aspects of cultural knowledge possessed by a community.

In the Indonesian context, Sibarani (2004) argues that ethnolinguistics is the study of language in relation to the culture of its users. Language serves as a medium through which local wisdom can be understood, including oral traditions, customary rituals, belief systems, and various social practices.

In agrarian societies, agricultural vocabulary often reflects the community's close relationship with farming activities. Terms referring to plant varieties, stages of land preparation, cultivation processes, and harvesting practices embody locally developed knowledge systems. Therefore, the study of the "rice language" in the Dayak Ngaju language provides valuable insights into the interrelationship between language, culture, and the social life of the Dayak Ngaju people.

Ecolinguistics and Traditional Ecological Knowledge

Ecolinguistics is a field of study that explores the relationship between language, humans, and the environment. Haugen (1972) introduced the concept of the *ecology of language*, emphasizing that language develops within specific social and ecological contexts. This concept later evolved into modern ecolinguistics, which views language not merely as a communication system but also as a reflection of human relationships with the natural environment.

Stibbe (2021) argues that language contains narratives, metaphors, and lexical expressions that reveal how people perceive and understand their environment. Consequently, environmental changes are often accompanied by changes in language use. When particular cultural practices or economic activities decline, the vocabulary associated with them may also disappear.

Within indigenous communities, language functions as a primary repository of traditional ecological knowledge (TEK). This knowledge includes information about plant species, land management techniques, seasonal patterns, and sustainable strategies for utilizing natural resources (Berkes, 2018). Local vocabulary often serves as a medium for storing and transmitting ecological knowledge within indigenous

societies (Stibbe, 2024). Such knowledge is passed down through social practices, oral traditions, customary rituals, and everyday language use.

The Dayak Ngaju people maintain a close relationship with their natural environment, particularly through traditional farming activities. The various rice-related terms found in the Dayak Ngaju language constitute part of the ecological knowledge that has developed through generations of experience in managing natural resources. Therefore, documenting the rice lexicon contributes not only to language preservation but also to safeguarding the traditional ecological knowledge of the Dayak Ngaju community.

Language Vitality and Regional Language Preservation

Language vitality refers to a language's capacity to continue being used and transmitted to subsequent generations. UNESCO (2021) identifies intergenerational transmission as one of the primary indicators of language sustainability. When younger generations cease to use a language, that language becomes vulnerable to language shift and eventual extinction.

The preservation of regional languages has become a significant issue in multilingual countries, including Indonesia. Regional language revitalization programs implemented by the Language Development and Fostering Agency demonstrate governmental commitment to maintaining Indonesia's linguistic diversity. Such revitalization efforts include language documentation, the development of teaching materials, dictionary compilation, and the promotion of regional language use in educational and community settings.

According to Sallabank (2021), language documentation constitutes a crucial initial step in language preservation. Documentation enables linguistic data to be systematically archived and utilized as learning resources for future generations. Moreover, it provides a foundation for broader language revitalization initiatives.

In the context of the Dayak Ngaju language, documenting rice-related vocabulary is particularly important because many traditional terms are becoming increasingly unfamiliar to younger generations. Changes in lifestyles, agricultural modernization, and the decline of traditional farming practices have placed certain lexical items at risk of disappearing from community use. Therefore, the documentation of rice-related terminology can serve as an effective strategy for strengthening the vitality of the Dayak Ngaju language (Mihing, 2003).

Rice Language as a Representation of Local Knowledge in Dayak Ngaju Society

Rice occupies a central position in the life of the Dayak Ngaju community. Beyond its role as a staple food, rice embodies social, cultural, and spiritual values that are reflected in various traditions and customary rituals. Traditional farming activities are not merely regarded as economic endeavors but also as integral components of cultural identity.

The existence of specialized rice-related terminology indicates that the Dayak Ngaju people possess a sophisticated body of knowledge concerning traditional agriculture. These lexical items encompass various aspects of agricultural activities, including land clearing, planting, crop maintenance, harvesting, and post-harvest storage. Each term contains valuable information regarding cultivation techniques, social relationships, and cultural values that have been transmitted across generations.

From both ethnolinguistic and ecolinguistic perspectives, rice-related terminology can be viewed as a representation of local knowledge that has emerged through long-term interactions between the community and its natural environment (Suharyo & Wibowo, 2025). The documentation of such vocabulary is therefore essential for preserving cultural knowledge and strengthening local cultural identity (Nurhayati & Pranowo, 2024), particularly among the Dayak Ngaju people in the face of increasingly rapid social change.

METHOD

This study employed a descriptive qualitative design using an ethnolinguistic approach to document rice-related lexicons in the Dayak Ngaju language and to analyze the lexical and cultural meanings embedded within them. Ethnolinguistics views language as an integral part of culture, enabling researchers to examine how lexical items reflect indigenous knowledge, social values, and cultural practices (Duranti, 2017; Sharifian, 2017). This approach was selected because the objective of the study was not only to document linguistic forms but also to reveal the cultural knowledge encoded in the rice lexicon used by the Dayak Ngaju community.

The research was conducted in Tumbang Sanamang, Tumbang Jiga, and Tumbang Kanja villages, located in Katingan Regency, Central Kalimantan, Indonesia. These villages were purposively selected because the majority of their inhabitants continue to use the Dayak Ngaju language in daily communication and maintain traditional rice-farming practices inherited across generations. The study specifically documented the Upper Katingan variety of the Dayak Ngaju language, which is spoken in the research area.

Although classified as part of the Katingan speech area, the Upper Katingan variety exhibits several phonological characteristics that distinguish it from other Katingan varieties. One notable feature is the realization of the vowel /e/ as an open-mid vowel and the preservation of diphthongs such as /ei/, as illustrated in the pronunciation of *parei*. These phonological features are considered more closely related to the Kapuas and Kahayan varieties of Dayak Ngaju than to other Katingan varieties. Consequently, the findings of this study are limited to the Upper Katingan variety documented in the selected villages.

Table 1.

Village	Informants	Role	Age
Tumbang Sanamang	1. M 2. IK	1. Farmer, 2. Damang	1. M (60) 2. IK (54)
Tumbang Jiga	1. S 2. AD	1. Farmer, 2. Community Elder	1. S (35) 2. AD (40)
Tumbang Kanja	1. K 2. NM	1. Farmer, 2. Community Elder	1. K (39) 2. NM (50)

The participants consisted of six native speakers of the Dayak Ngaju language, with two participants representing each village. They included farmers, community leaders, and a *Damang* (customary leader) who possessed extensive knowledge of traditional agriculture and local cultural practices. Participants were selected using purposive sampling based on four criteria: (1) being native speakers of the Upper Katingan variety of Dayak Ngaju; (2) actively using the language in daily communication; (3) possessing knowledge of traditional rice cultivation and local customs; and (4) being willing to participate voluntarily in the research. The participants ranged in age from 35 to 60 years, representing generations that continue to actively practice traditional agricultural activities.

The primary data consisted of rice-related lexicons used by the Dayak Ngaju community in everyday communication. Data were collected through semi-structured interviews guided by an interview protocol designed to elicit vocabulary associated with rice cultivation, processing, storage, utilization, and related cultural practices. During the interviews, the researcher recorded detailed field notes regarding lexical forms, meanings, and explanations provided by the participants.

To complement the interview data, field observations were conducted to understand how the documented lexicons were used within traditional agricultural activities and community life. Documentary sources, including the *Kamus Bahasa Dayak Ngaju-Indonesia* (Mihing, 2003), were also consulted to compare the collected lexical items. This comparison revealed that several lexicons documented in this study, including *kajugu* and *bunyer*, were not recorded in the available dictionary, indicating that they remain part of the local lexical repertoire used in the Upper Katingan speech community.

The data were analyzed using an ethnolinguistic framework adapted from Duranti (2017) and supported by principles of language documentation proposed by Himmelmann (2006). The analysis consisted of six stages: (1) identifying rice-related lexical items collected from the participants; (2) classifying the lexicons according to semantic categories and stages of rice cultivation; (3) analyzing the lexical meanings of each item; (4) interpreting their cultural meanings based on interview data and field observations; (5) describing the relationship between lexical meaning and indigenous knowledge; and (6) drawing conclusions concerning the role of the rice lexicon in preserving cultural heritage and the Dayak Ngaju language.

To enhance the credibility of the findings, data triangulation was conducted by comparing information obtained from different participants, field observations, and documentary sources. Lexical meanings and cultural interpretations were further verified through repeated consultation with native speakers to ensure that the documented meanings accurately reflected local language use and cultural practices. This procedure helped minimize researcher bias while increasing the reliability of the documented lexicons.

As part of the language documentation process, each documented lexicon was transcribed using the International Phonetic Alphabet (IPA) to represent its pronunciation accurately. The transcription was based on the phonological characteristics of the Upper Katingan variety of the Dayak Ngaju language and was verified with native speakers during data validation. The inclusion of phonetic transcription is intended to facilitate future linguistic research and to support the long-term documentation of the Dayak Ngaju language.

RESULTS AND DISCUSSION

Results

Inventory of the Rice Lexicon in the Dayak Ngaju Language

The documentation process identified nine rice-related lexical items that remain actively used by native speakers of the Upper Katingan variety of the Dayak Ngaju language in Tumbang Sanamang, Tumbang Jiga, and Tumbang Kanja villages, Katingan Regency, Central Kalimantan. These lexical items represent different stages of the traditional rice cultivation cycle, ranging from seed selection and cultivation to harvesting, processing, storage, and food preparation. The findings demonstrate that the Dayak Ngaju community possesses a rich and specialized agricultural vocabulary that reflects not only linguistic diversity but also indigenous knowledge concerning rice cultivation and utilization.

As part of the language documentation process, each lexical item was recorded using its original orthography and transcribed into the International Phonetic Alphabet (IPA) based on the pronunciation of native speakers of the Upper Katingan variety. The phonetic transcription facilitates accurate documentation of pronunciation and provides a linguistic reference for future studies on the Dayak Ngaju language. Table 1 presents the documented rice lexicon together with its phonetic transcription, grammatical category, Indonesian equivalent, and lexical meaning.

Table II. Documented Rice Lexicon of the Dayak Ngaju Language

No.	Dayak Ngaju Lexicon	IPA	Word Class	Indonesian Equivalent	Lexical Meaning
1	<i>parei</i>	/pa.rɛi/	Noun	padi	Refers to the rice plant cultivated as the primary staple crop and the source of rice (<i>behas</i>).
2	<i>behas</i>	/bɛ.has/	Noun	beras	Rice obtained after the milling process and ready for cooking or ritual use.
3	<i>binyi</i>	/bi.ɲi/	Noun	bibit padi	Selected rice seed reserved for the next planting season.
4	<i>eta</i>	/ɛ.ta/	Noun	antah	Rice husk residue or fragments of husk remaining after milling and sometimes mixed with rice grains.
5	<i>apis</i>	/a.pis/	Noun	sekam	Empty rice husk that contains no grain after harvesting or threshing.
6	<i>bunyer</i>	/bu.ɲɛr/	Noun	katul/menir	Fine rice fragments or broken grains produced during the milling process.
7	<i>bulu</i>	/bu.lu/	Noun	dedak	Rice bran produced during milling, commonly used as animal feed.
8	<i>kajugu</i>	/ka.dʒu.gu/	Noun	jerami	Rice straw remaining after threshing, commonly used as organic fertilizer or livestock bedding.
9	<i>kenta</i>	/kɛn.ta/	Noun	emping ketan	Traditional food prepared from roasted and flattened young glutinous rice.

Phonological Characteristics of the Documented Rice Lexicons

The phonetic transcription of the documented rice lexicons reveals several phonological characteristics of the Upper Katingan variety of the Dayak Ngaju language. Although the present study focuses on language documentation rather than phonological description, the documented lexical items preserve distinctive phonetic features that contribute to the characterization of this regional variety.

One prominent characteristic is the occurrence of the open-mid front unrounded vowel /ɛ/, which appears in several lexical items, including *parei* (/pa.rɛi/), *behas* (/bɛ.has/), *eta* (/ɛ.ta/), *bunyer* (/bu.ɲɛr/), and *kenta* (/kɛn.ta/). The presence of this vowel distinguishes the pronunciation of the documented lexicons from the corresponding Indonesian orthography, where the letter may represent different vowel qualities. In the Upper Katingan variety, the vowel is consistently realized as /ɛ/ in these lexical items.

Another notable feature is the preservation of the diphthong /ei/ in the lexicon *parei* (/pa.rɛi/). Rather than being realized as two separate vowels, the sequence is pronounced as a single diphthong, representing a phonological characteristic that remains actively maintained by native speakers. This feature contributes to the phonetic identity of the Upper Katingan variety and reflects the preservation of traditional pronunciation patterns.

The documented lexicons also exhibit the palatal nasal consonant /ɲ/, represented orthographically by the digraph, as observed in *binyi* (/bi.ɲi/) and *bunyer* (/bu.ɲɛr/). In addition, the voiced postalveolar affricate /dʒ/ occurs in *kajugu* (/ka.dʒu.gu/),

corresponding to the pronunciation of the letter in Indonesian words such as *jalan*. These consonantal realizations demonstrate that the phonological inventory of the documented variety shares several features with other Western Indonesian languages while preserving its own dialectal characteristics.

The syllable structures observed in the documented lexicons are predominantly simple, consisting of CV and CVC patterns that are characteristic of many Austronesian languages. This relatively regular syllable organization contributes to the rhythmic pronunciation of the documented vocabulary and reflects the phonotactic patterns of the Dayak Ngaju language.

Overall, the phonetic documentation presented in this study provides an additional linguistic contribution beyond lexical documentation. By incorporating International Phonetic Alphabet (IPA) transcription, the study records not only the lexical forms but also their pronunciation, thereby supporting future linguistic research, comparative dialect studies, and regional language preservation initiatives.

Table III.

Phonological Feature	Example	IPA	Description
Open-mid front vowel	<i>behas</i>	/bɛ.has/	The vowel is realized as /ɛ/.
Open-mid front vowel	<i>eta</i>	/ɛ.ta/	Initial /ɛ/ occurs in the first syllable.
Diphthong	<i>parei</i>	/pa.rɛi/	Final is pronounced as a diphthong.
Palatal nasal	<i>binyi</i>	/bi.ɲi/	Orthographic corresponds to /ɲ/.
Palatal nasal	<i>bunyer</i>	/bu.ɲɛr/	Presence of the palatal nasal /ɲ/.
Postalveolar affricate	<i>kajugu</i>	/ka.dʒu.gu/	Orthographic corresponds to /dʒ/.

The Rice Lexicon across the Traditional Rice Cultivation Cycle

The documented rice lexicons can be classified into three semantic domains according to their functions within the traditional rice cultivation system of the Dayak Ngaju community.

These domains comprise lexicons associated with rice cultivation, rice processing, and post-harvest products and utilization. This semantic organization demonstrates that the rice lexicon is systematically structured and reflects the sequence of agricultural activities practiced by the community.

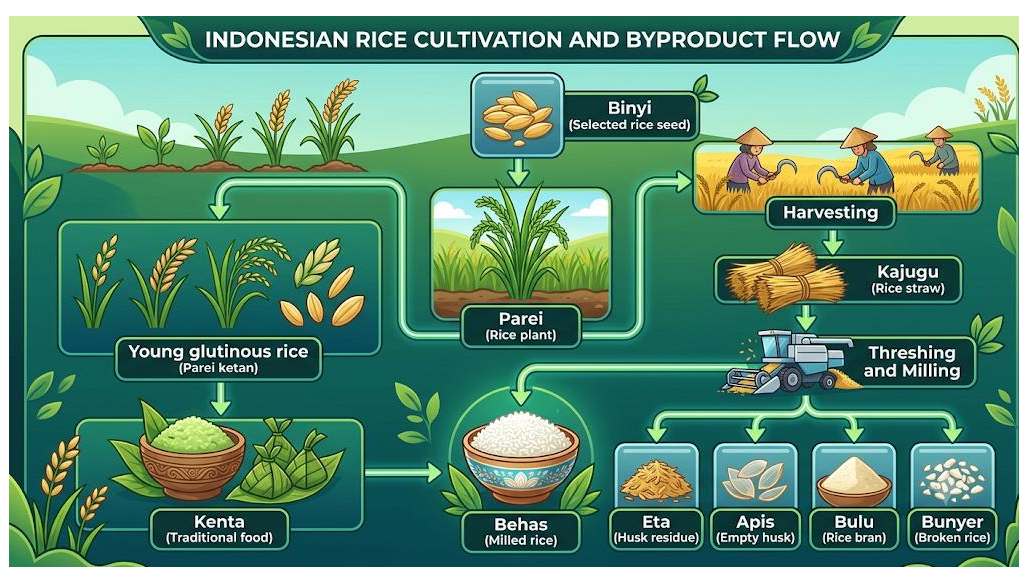


Figure 1.

Lexicons Related to Rice Cultivation

The first semantic domain consists of lexical items associated with the initial stages of rice cultivation. Two lexicons belong to this category, namely *binyi* and *parei*. The lexicon *binyi* refers to carefully selected rice seeds reserved for the following planting season. Unlike ordinary rice grains, *binyi* specifically denotes seeds chosen according to their quality to ensure successful cultivation. Meanwhile, *parei* refers to the rice plant during its growth cycle before harvesting. Together, these lexicons represent the beginning of the agricultural process and distinguish the concepts of seed and cultivated rice within the Dayak Ngaju agricultural vocabulary.

Lexicons Related to Rice Processing

The second semantic domain comprises lexical items referring to the processing of harvested rice. These include *eta*, *apis*, *bunyer*, and *bulu*. The lexicon *eta* denotes rice husk residue or fragments of husk that remain mixed with rice grains after milling. *Apis* refers to empty rice husks that contain no grain, whereas *bunyer* denotes fine rice fragments or broken grains produced during the milling process. The lexicon *bulu* refers to

rice bran separated from the grain during milling and commonly utilized as livestock feed. The existence of distinct lexical items for these by-products demonstrates the detailed linguistic categorization developed by the Dayak Ngaju community throughout the rice-processing stages.

Lexicons Related to Post-Harvest Products and Utilization

The third semantic domain includes lexical items associated with products derived from harvested rice and their subsequent utilization. *Behas* refers to milled rice that is ready for consumption, while *kajugu* denotes rice straw remaining after threshing, which is traditionally reused as organic fertilizer or as bedding for domestic animals. The lexicon *kenta* refers to a traditional food prepared from roasted and flattened young glutinous rice. These lexical items illustrate that harvested rice is utilized comprehensively, with each component receiving a specific lexical designation according to its function within the community.

The documented rice lexicons do not function as isolated lexical items. Instead, they constitute an interconnected lexical system representing the traditional rice

cultivation cycle of the Dayak Ngaju community. Each lexicon corresponds to a specific stage of agricultural activities, from seed selection (*binyi*) and rice cultivation (*parei*) to harvesting, processing, and food preparation (*behas* and *kenta*). This systematic organization demonstrates that the rice lexicon serves not only as agricultural vocabulary but also as a linguistic representation of indigenous ecological knowledge transmitted across generations.

Discussion

The findings demonstrate that the documented rice lexicons of the Dayak Ngaju language constitute an interconnected system of indigenous knowledge rather than a collection of isolated lexical items. The nine documented lexicons represent successive stages of the traditional rice cultivation cycle, beginning with seed selection (*binyi*), rice cultivation (*parei*), harvesting and post-harvest processing (*kajugu*, *eta*, *apis*, *bunyer*, and *bulu*), and ending with rice consumption and cultural practices (*behas* and *kenta*). This lexical organization illustrates how the Dayak Ngaju language encodes ecological knowledge, agricultural practices, cultural values, and ritual traditions that have been transmitted across generations. Therefore, the documented rice lexicon functions not only as linguistic data but also as a repository of indigenous knowledge and cultural heritage.

Rice Lexicon as Indigenous Agricultural Knowledge

The first thematic finding indicates that the rice lexicon documents indigenous agricultural knowledge developed by the Dayak Ngaju community through generations of farming experience. The lexical items *binyi* and *parei* demonstrate that rice cultivation is not merely an agricultural activity but also a knowledge system encompassing seed selection, environmental adaptation, and the classification of rice varieties according to local ecological conditions.

Rice Lexicon as Indigenous Agricultural Knowledge

The lexical items *binyi* and *parei* illustrate that the Dayak Ngaju community possesses a sophisticated system of agricultural knowledge embedded in its vocabulary. Rather than functioning as general terms for rice, these lexicons distinguish different stages of cultivation and reflect practical knowledge accumulated through generations of farming experience.

The lexicon *binyi* refers specifically to selected rice seeds reserved for the following planting season. According to Informant M:

“*Binyi yang digunakan adalah padi terbaik yang disimpan untuk musim berladang berikutnya. Untuk lahan yang besar, biasanya binyi disimpan sekitar 100 gantang.*”

This statement indicates that seed selection is a deliberate practice rather than a random activity. The quantity of *binyi* is traditionally measured using *gantang*, a customary unit of measurement used by the Dayak Ngaju community

before modern weighing systems became widespread. The continued use of this traditional measurement reflects the persistence of indigenous agricultural practices within the community.

Informant S further explained:

“*Jenis-jenis padi yang disimpan sebagai binyi beraneka ragam. Ada padi yang cocok ditanam di tanah datar, tanah berlumpur (luwau), dan tanah berbukit.*”

This explanation demonstrates that the Dayak Ngaju community classifies rice varieties according to environmental conditions. The selection of seeds is closely related to local ecological knowledge, where different rice varieties are matched with specific landscape characteristics such as flat land, muddy fields (*luwau*), and hilly areas. Such knowledge reflects adaptive agricultural strategies developed through long-term interaction with local ecosystems.

The lexical item *parei* complements this knowledge system by referring to the rice plant during its cultivation stage. Informant K explained that several traditional rice varieties continue to be recognized by the community, including *parei dahan bajang*, *parei amuntai sarawai*, *parei palapas*, *parei kujab*, *parei gading garu*, and *parei garagai*. The preservation of these names indicates that the Dayak Ngaju community maintains a detailed lexical classification of rice varieties, each representing specific agricultural characteristics recognized through local farming experience.

From an ethnolinguistic perspective, the lexical distinction between *binyi* and *parei*, together with the classification of rice varieties, demonstrates that language functions as a repository of indigenous agricultural knowledge rather than merely a system of naming objects. This finding supports Berkes' (2018) concept of Traditional Ecological Knowledge, which emphasizes that ecological knowledge is accumulated through continuous interaction between communities and their environment and is transmitted across generations through cultural practices, including language.

Rice By-products as a Representation of Sustainable Resource Management

The documented rice lexicons demonstrate that the Dayak Ngaju community possesses a comprehensive system of knowledge concerning the utilization of rice by-products. Rather than being regarded as agricultural waste, the remaining parts of the rice plant are reused in farming, livestock management, and household activities, reflecting an indigenous principle of sustainable resource management.

According to Informants NM and AD, several rice-related lexical items continue to play important roles in everyday agricultural practices.

“*Kajugu biasanya digunakan sebagai tempat ayam bertelur atau dijadikan kompos alami. Bulu digunakan sebagai campuran pakan ayam, sedangkan apis dimanfaatkan sebagai kompos alami atau bahan dasar membuat abu gosok.*”

("Kajugu is commonly used as nesting material for chickens or processed into natural compost. *Bulu* (rice bran) is mixed into chicken feed, while *apis* (rice husk) is utilized as natural compost or as a raw material for making traditional scouring ash.")

Informant NM further explained the functions of *eta* and *bunyer*:

"*Eta* biasanya diperoleh dari hasil mengiyap beras atau membersihkan beras dengan cara diangin-anginkan menggunakan alat tradisional Dayak Ngaju yang disebut *kiyap*. *Eta* kemudian dikumpulkan sebagai pakan ayam. *Bunyer* juga dimanfaatkan sebagai pakan ayam."

("*Eta* is obtained during the process of cleaning rice by winnowing it with a traditional Dayak Ngaju tool known as *kiyap*. The collected *eta* is commonly used as chicken feed, while *bunyer* (broken rice fragments) is also utilized as poultry feed.")

These findings indicate that every by-product generated throughout the rice cultivation and processing cycle has a specific function within the Dayak Ngaju community. *Kajugu* is reused in farming and livestock management, *bulu* serves as animal feed, *apis* is transformed into compost and traditional household materials, while *eta* and *bunyer* are utilized as poultry feed. The existence of distinct lexical items for each by-product demonstrates that the Dayak Ngaju language encodes detailed knowledge regarding the classification and utilization of agricultural resources.

From an ethnolinguistic perspective, these lexical distinctions reflect an indigenous ecological worldview in which agricultural residues are regarded as valuable resources rather than waste. The documented vocabulary therefore represents more than linguistic diversity; it preserves knowledge concerning sustainable farming practices, efficient resource utilization, and environmental adaptation that has been transmitted across generations. This finding is consistent with Berkes (2018), who argues that Traditional Ecological Knowledge includes locally developed strategies for sustainable environmental management derived from long-term interaction between communities and their surrounding ecosystems. Consequently, documenting these lexical items contributes not only to preserving the Dayak Ngaju language but also to safeguarding the ecological knowledge embedded within its agricultural vocabulary.

4.2.4. Rice as a Medium of Ritual and Cultural Identity

The lexical item *behas* refers to rice obtained after the milling process and ready for consumption. However, the field data indicate that its significance extends beyond its role as a staple food. Within the Dayak Ngaju community, *behas* also functions as a ritual medium that symbolizes communication between humans, nature, and the spiritual world.

As explained by Informant IK, a *Damang* (customary leader):

"Bagi masyarakat adat Dayak Ngaju, beras tidak hanya bermakna sebagai bahan konsumsi, melainkan juga sebagai perantara dalam ritual. Contohnya adalah ritual *tampung tawar* untuk meramu *binyi* dan menunjuk upun *binyi* sebagai tahapan awal ritual menanam padi. Ramuan *tampung tawar* terdiri atas daun pandan yang dicincang, beras, minyak wangi, dan telur ayam kampung. Beras dicampurkan ke dalam ramuan tersebut, kemudian *binyi* diberi *tampung tawar* sebelum disemai. Dalam kepercayaan Kaharingan, beras juga diberi warna merah, kuning, dan putih sebagai perantara untuk memanggil roh."

("For the Dayak Ngaju community, rice is not only a food source but also serves as a medium in ritual practices. One example is the *tampung tawar* ritual performed before sowing *binyi* (rice seeds), in which chopped pandan leaves, rice, fragrant oil, and a free-range chicken egg are prepared as ritual materials. In the Kaharingan belief system, rice is also colored red, yellow, and white and functions as a medium for communicating with ancestral or spiritual beings.")

This testimony demonstrates that *behas* possesses both material and symbolic functions within Dayak Ngaju culture. In agricultural rituals such as *tampung tawar*, rice serves as an essential ritual element marking the beginning of the planting cycle, while in Kaharingan religious practices it functions as a symbolic medium associated with communication with the spiritual realm. These practices indicate that the cultural meaning of *behas* cannot be separated from the community's belief system and ritual traditions.

From an ethnolinguistic perspective, the lexical item *behas* embodies cultural conceptualizations that extend beyond its literal meaning as food. The ritual use of rice illustrates how language encodes shared cultural knowledge and belief systems within the speech community (Sharifian, 2017). Furthermore, the continued use of *behas* in customary ceremonies reflects its role as part of the Dayak Ngaju community's intangible cultural heritage, where linguistic expressions, ritual practices, and indigenous beliefs are closely interconnected (UNESCO, 2003). Therefore, documenting the lexical item *behas* contributes not only to regional language preservation but also to safeguarding the cultural knowledge embedded within the Dayak Ngaju tradition.

CONCLUSION

This study documented rice-related vocabulary in the Dayak Ngaju language as part of broader efforts to preserve regional languages and the cultural knowledge of the Dayak Ngaju people. The findings identified nine principal rice-related lexicons, namely *parei* (rice plant), *behas* (rice), *binyi* (rice seed), *eta* (rice husk residue), *apis* (empty husk), *bunyer* (rice bran particles), *bulu* (bran), *kajugu* (straw), and *kenta* (flattened glutinous rice).

From an ethnolinguistic perspective, each lexicon possesses not only a lexical meaning associated with rice cultivation and processing but also a cultural meaning that reflects the values

and worldview of the Dayak Ngaju community. These values include food security, family prosperity, sustainability, mutual cooperation, respect for agricultural products, ecological wisdom, and harmonious relationships among humans, nature, and the spiritual realm. The existence of these lexical items demonstrates that language functions as a repository of local knowledge transmitted across generations.

The documentation of rice-related lexicons in the Dayak Ngaju language is particularly important in light of ongoing social change, agricultural modernization, and the decline of traditional farming practices, all of which may contribute to the reduced use of these terms among younger generations. Therefore, documenting the rice lexicon serves not only as a strategy for regional language preservation but also as a means of safeguarding the cultural identity and traditional ecological knowledge of the Dayak Ngaju people.

Kenta as a Representation of Culinary Heritage and Cultural Identity

The lexical item *kenta* refers to a traditional Dayak Ngaju food prepared from young glutinous rice harvested before the main harvest season. Unlike *behas*, which refers to milled rice for daily consumption and ritual practices, *kenta* represents a distinctive culinary product closely associated with traditional agricultural activities.

According to the informants, young glutinous rice is harvested before the regular harvest because its grains are still soft and suitable for processing. The grains are roasted and then pounded until they become flat, producing *kenta*. Before serving, *kenta* is commonly cooked and sprinkled with freshly grated coconut, making it one of the traditional foods still recognized by the Dayak Ngaju community.

The preparation of *kenta* demonstrates that rice cultivation is not limited to food production but also encompasses traditional culinary knowledge that has been transmitted across generations. The timing of harvesting young glutinous rice, the processing techniques, and the serving method constitute cultural practices preserved within the community. Consequently, *kenta* functions not merely as a traditional food but also as a marker of cultural identity that reflects the continuity of local culinary traditions.

From an ethnolinguistic perspective, the lexical item *kenta* illustrates how language preserves knowledge related to traditional food practices and cultural identity. The existence of a specific lexical item for this food indicates that the Dayak Ngaju language encodes culturally significant knowledge concerning agricultural products and their transformation into traditional cuisine. This finding supports UNESCO's (2003) concept of intangible cultural heritage, which recognizes traditional food practices and indigenous knowledge as important components of cultural heritage requiring documentation and preservation. Therefore, documenting the lexical item *kenta* contributes not only to the preservation of the Dayak Ngaju language but also to safeguarding the culinary

heritage embedded within the community's agricultural traditions.

This study has several limitations that should be considered when interpreting its findings. First, the documentation was limited to the Upper Katingan variety of the Dayak Ngaju language spoken in Tumbang Sanamang, Tumbang Jiga, and Tumbang Kanja villages in Katingan Regency. Although this variety preserves a rich rice-related lexicon, lexical variation may exist across other Dayak Ngaju-speaking communities in Central Kalimantan. Therefore, the documented lexical items should not be interpreted as representing all varieties of the Dayak Ngaju language.

Second, the study focused specifically on rice-related lexical items and their lexical and cultural meanings. Other components of the traditional agricultural knowledge system, such as terminology for farming tools, cultivation techniques, oral traditions, ritual chants, and agricultural expressions, were beyond the scope of the present research. Consequently, the documentation presented here represents only one part of the broader linguistic and cultural knowledge associated with traditional rice cultivation.

Third, although the study incorporated phonetic transcription using the International Phonetic Alphabet (IPA), the transcription was based on field documentation and native-speaker verification rather than instrumental acoustic analysis. Future research could complement the present findings by employing acoustic phonetic analysis to provide a more detailed description of the phonological characteristics of the Upper Katingan variety.

Future studies are encouraged to expand the documentation to other Dayak Ngaju speech varieties, compare lexical variation across regions, and document additional domains of indigenous knowledge related to traditional agriculture. Such efforts would contribute to a more comprehensive understanding of the linguistic diversity, ecological knowledge, and cultural heritage of the Dayak Ngaju community while supporting regional language preservation and revitalization.

CONCLUSION

This study documented nine rice-related lexical items in the Upper Katingan variety of the Dayak Ngaju language, namely *binyi*, *parei*, *kajugu*, *eta*, *apis*, *bunyer*, *bulu*, *behas*, and *kenta*. Through language documentation and ethnolinguistic analysis, the study demonstrates that these lexical items form an interconnected lexical system representing the traditional rice cultivation cycle rather than a collection of isolated vocabulary items. The inclusion of International Phonetic Alphabet (IPA) transcription further strengthens the documentation by preserving not only the lexical forms but also their pronunciation for future linguistic research.

The findings reveal that the documented rice lexicon embodies multiple dimensions of indigenous knowledge. The lexical items associated with seed selection and rice cultivation

(*binyi* and *parei*) reflect traditional agricultural knowledge concerning seed preservation, environmental adaptation, and local rice varieties. Meanwhile, the lexicons related to rice by-products (*kajugu*, *eta*, *apis*, *bunyer*, and *bulu*) demonstrate sustainable resource management practices in which every component of the harvested rice plant is utilized for agricultural, livestock, or household purposes. Furthermore, the lexicons *behas* and *kenta* illustrate that rice occupies an important position in the ritual life, culinary traditions, and cultural identity of the Dayak Ngaju community. These findings confirm that the rice lexicon functions not merely as agricultural terminology but also as a linguistic representation of ecological knowledge, social values, and cultural heritage.

This study contributes to the fields of language documentation and ethnolinguistics by integrating phonetic documentation, lexical analysis, and cultural interpretation within a single analytical framework. The incorporation of IPA transcription, empirical evidence from community informants, and ethnolinguistic interpretation addresses the need for more systematic documentation of regional languages while strengthening the preservation of indigenous knowledge embedded in local vocabularies. Beyond its academic contribution, the documented rice lexicon provides valuable resources for regional language preservation, cultural education, and the safeguarding of the intangible cultural heritage of the Dayak Ngaju community.

The findings also have practical implications for language revitalization initiatives. The documented lexical data may serve as a foundation for developing digital dictionaries, community-based language archives, local curriculum materials, and other educational resources that support the intergenerational transmission of the Dayak Ngaju language and its cultural knowledge. By documenting culturally significant vocabulary together with its phonetic, lexical, and cultural dimensions, this study contributes to broader efforts to preserve both linguistic diversity and indigenous cultural heritage in Central Kalimantan.

REFERENCES

- Asrawijaya, Enkin, (2024). Traditional Ecological Wisdom for the Resilience of Indigenous Peoples in Indonesia. *Besari: Journal of Social and Cultural Studies*. Vol. 1 No. 2 (2024 <https://doi.org/10.71155/besari.v1i2.29>)
- Austin, P. K., & Sallabank, J. (Eds.). (2022). *The Cambridge handbook of endangered languages*. Cambridge University Press.
- Eberhard, D. M., Simons, G. F., & Fennig, C. D. (Eds.). (2024). *Ngaju*. In *Ethnologue: Languages of the world* (27th ed.). SIL International. <https://www.ethnologue.com/language/nij>
- Berkes, F. (2018). *Sacred ecology* (4th ed.). Routledge.
- Duranti, A. (2017). *Linguistic anthropology* (2nd ed.). Cambridge University Press.

- Fill, A., & Penz, H. (Eds.). (2018). *The Routledge handbook of ecolinguistics*. Routledge.
- Haugen, E. (1972). *The ecology of language*. Stanford University Press.
- Himmelman, N. P. (2006). Language documentation: What is it and what is it good for? in J. Gippert, N. P. Himmelman, & U. Mosel (Eds.), *Essentials of language documentation* (pp. 1–30). Mouton de Gruyter.
- Lewis, M. P., Simons, G. F., & Fennig, C. D. (2023). *Ethnologue: Languages of the world* (26th ed.). SIL International.
- Mihing, B. (2003). *Kamus Bahasa Dayak Ngaju–Indonesia*. Palangka Raya: Pemerintah Provinsi Kalimantan Tengah.
- Palmer, G. B. (2017). *Toward a theory of cultural linguistics*. University of Texas Press.
- Sallabank, J. (2021). Language revitalisation and language documentation. In A. L. Berez-Kroeker, B. McDonnell, E. Koller, & L. B. Collister (Eds.), *Revitalizing endangered languages* (pp. 199–219). Cambridge University Press. <https://doi.org/10.1017/9781108641142.014>
- Sharifian, F. (2011). *Cultural conceptualisations and language: Theoretical framework and applications*. <https://doi.org/10.1075/clsc.1>
- Sharifian, F. (2017). *Cultural linguistics*. John Benjamins Publishing Company.
- Sibarani, R. (2004). *Antropologi linguistik dan linguistik antropologi*. Penerbit Poda.
- Stibbe, A. (2021). *Ecolinguistics: Language, ecology and the stories we live by* (2nd ed.). Routledge.
- UNESCO. (2021). *World report of languages: Towards a global assessment framework for language vitality*. UNESCO Publishing.