

ARTOCARPUS DIVERSITY IN LOLOAN VILLAGE, NORTH LOMBOK**Nutrinem¹, Slamet Mardiyanto Rahayu²****^{1,2}Universitas Islam Al-Azhar, Mataram, Indonesia****¹Email: nnutri452@gmail.com****²Email: slamet.mardiyantorahayu84@gmail.com****Abstract**

Lombok is one of the islands in the Lesser Sunda Islands, home to a rich biodiversity, including plants. This research is necessary to determine the diversity of *Artocarpus* plants in Loloan Village. Research shows that four *Artocarpus* species are present in Loloan Village: *Artocarpus heterophyllus*, *A. altilis*, *A. integer*, and *A. camansi*.

Keywords: biodiversity, flora, rural, West Nusa Tenggara

INTRODUCTION

Lombok is one of the islands in the Lesser Sunda Islands, home to a rich biodiversity (Rahayu et al., 2022; Rahayu et al., 2023, Rahayu et al., 2024; Rahayu et al., 2025), including plants. Loloan is a village in Bayan District, North Lombok Regency.

The *Artocarpus* genus, belonging to the Moraceae family, is a group of plants with a very rich species diversity, encompassing approximately 50 to 60 species distributed throughout the tropics, particularly in Southeast Asia and the Pacific. To date, no research has focused on the diversity of *Artocarpus* plants in Loloan Village. Therefore, this research is necessary to determine the diversity of *Artocarpus* plants in Loloan Village.

Research on the diversity of *Artocarpus* plants in rural areas holds significant strategic significance, particularly in strengthening local food security by creating alternative sources of carbohydrates and nutrients that can withstand climate change. The presence of various species, such as breadfruit, kluwih, and jackfruit in home gardens or community forests, provides residents with the opportunity to diversify their diets independently, thereby reducing dependence on staple foods. Furthermore, mapping varieties at the local level opens up opportunities for economic development through product processing, from using seeds as flour to processing fruit for the creative food industry, which can directly add value to local commodities.

From a conservation perspective, rural areas serve as germplasm banks, storing the genetic wealth of various wild relatives of *Artocarpus* that may possess superior traits, such as pest resistance or adaptability to marginal lands. This research is crucial for documenting local ethnobotanical knowledge regarding traditional uses and increasingly marginalized cultivation practices, while also providing a scientific basis for future pharmacological development.

From an ecological perspective, the integration of trees into rural agroforestry systems contributes significantly to maintaining soil structure

stability, protecting the water cycle, and providing habitat for pollinators, making it an important component of sustainable and environmentally friendly rural development.

METHOD

This research was conducted in Loloan Village, Bayan District, North Lombok Regency. The research used exploration and observation methods, followed by morphological identification and interviews with local residents. The results were analyzed descriptively.

RESULTS AND DISCUSSION

Based on research, four species belonging to the genus *Artocarpus* were found in Loloan Village, namely: *Artocarpus heterophyllus*, *A. altilis*, *A. integer*, and *A. camansi*. Jackfruit (*Artocarpus heterophyllus*) and breadfruit (*Artocarpus altilis*) have become global food commodities as sources of carbohydrates and fresh fruit. In addition, there are also cempedak (*Artocarpus integer*) which is known for its sharp aroma and soft flesh texture, and kluwih (*Artocarpus camansi*) which is often processed as a vegetable because it has seeds that resemble nuts.

Rural communities utilize *Artocarpus heterophyllus*, or jackfruit, comprehensively as a pillar of food security and a highly reliable source of household income. The ripe fruit is consumed as a source of fresh energy and vitamins, while the young fruit is the main ingredient in various traditional dishes such as gudeg or sayur lodeh, which are essential daily dishes. Not only limited to human consumption, the leaves are highly productive as feed for ruminant livestock, while the seeds are often processed into nutritious snacks or flour. In terms of materials, jackfruit wood, with its strong, termite-resistant, and golden-yellow characteristics, is often utilized by villagers for house construction, furniture, and even traditional musical instruments. The integrated use of all parts of the tree reflects local wisdom in managing biological resources efficiently and sustainably.

Rural communities utilize *Artocarpus altilis*, or breadfruit, as a pillar of independent food security because its carbohydrate-rich fruit can be easily processed into a staple food substitute for rice, either by steaming, frying, or making flour. In addition to its nutritional value, breadfruit leaves have long been known in traditional medicine as an herbal remedy to help treat kidney and heart disorders thanks to their high flavonoid content. Furthermore, the tree's fast-growing characteristics with a wide canopy make it an ideal choice in agroforestry systems to maintain groundwater availability and provide shade for crops below. Furthermore, breadfruit latex is often used by residents as a natural adhesive, while its lightweight yet durable wood is used for simple household furniture and light construction, making it a multifunctional bioasset for economic and ecological well-being.

Rural communities utilize *Artocarpus integer*, or cempedak, as a valuable seasonal food source because all parts of the fruit can be optimally processed

without leaving any waste. The ripe flesh, with its sharp aroma and distinctive sweetness, is consumed directly or processed into snacks such as fritters, while the seeds are boiled as a savory additional source of carbohydrates. One unique form of local wisdom is the use of fermented cempedak fruit skin to make mandai, a meat-like food that is a mainstay side dish to increase family food security. In addition to being a source of nutrition, cempedak trees are also used for their strong wood for building materials and boat building, while their dense tree canopy provides microclimate protection for the village garden ecosystem, making it an integrated economic and ecological asset in daily life.

Rural communities utilize *Artocarpus camansi*, or kluwih, as an important vegetable component supporting household food sovereignty, especially since the fruit can be harvested almost year-round. Unlike breadfruit, kluwih has abundant seeds that are often collected to be boiled or roasted as a protein- and fat-rich snack, or even processed into savory chili sauce and curry mixes. In addition to the seeds, the young flesh of kluwih fruit is a popular ingredient in various traditional dishes such as sayur lodeh and lodeh tewel due to its texture that absorbs spices very well. Ecologically, kluwih trees are often planted along land boundaries or riverbanks in rural areas due to their effective root system in preventing erosion and maintaining soil moisture, while their dried flowers are traditionally burned as a natural mosquito repellent, demonstrating how every part of this plant is closely integrated into the lifestyle and self-reliance solutions of rural communities.

CONCLUSION

Research shows that four *Artocarpus* species are present in Loloan Village: *Artocarpus heterophyllus*, *A. altilis*, *A. integer*, and *A. camansi*. Jackfruit (*A. heterophyllus*) and breadfruit (*A. altilis*) have become worldwide food crops, supplying carbohydrates and fresh fruit. Additionally, cempedak (*A. integer*) is noted for its strong aroma and soft flesh, while kluwih (*A. camansi*) is often used as a vegetable because its seeds resemble nuts.

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