International Conference on Rural Development and Entrepreneurship (CORE 2026)
Proceedings
Vol. 08 Year 2026, 576 – 587

IDENTIFYING LEADING COMMODITIES FOR ACHIEVING RURAL ECONOMIC SUSTAINABILITY IN JANTHO TRANSMIGRATION AREA

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Abstract

This study aims to identify and determine potential leading commodities in the Jantho Transmigration Area, Aceh Besar Regency, within the framework of sustainable agriculture, agroindustry, and food security entrepreneurship. The background of this study is the limitations of rice as the leading commodity, including challenges with irrigation infrastructure, low productivity, and the lack of integration of the value chain with the agroindustry sector. This study employs a mixed-methods approach, combining qualitative data from observation, interviews, and Focus Group Discussions (FGDs), along with quantitative analysis using the Analytical Hierarchy Process (AHP). Research respondents included key stakeholders such as farmers, local governments, technical agencies, and local economic actors to evaluate alternative commodities based on agroecological, economic, and value chain structure. The study found that rice is limited in its ability to support sustainable economic development in the region. In contrast, plantation commodities, specifically candlenut, cocoa, and areca nut, demonstrate greater development potential due to suitable land, adaptability, and value addition opportunities. According to the AHP analysis, candlenut emerged as the priority leading commodity. Its strengths include strong agroclimatic suitability, steady market demand, and robust potential for local value chain development. The study concludes that developing candlenut will likely strengthen the rural economy by fostering agro-industrial processing and promoting local entrepreneurship.

Keywords: transmigration areas, leading commodity, candlenut, sustainable farming

INTRODUCTION

The Jantho Transmigration Area is one of the strategic areas in Aceh Besar Regency, Aceh Province, encompassing the sub-districts of Kota Jantho, Lembah Seulawah, and part of Seulimeum. This area is being developed as a new growth center to promote equitable regional development and improve community welfare. According to Peraturan Bupati Aceh Besar Nomor 12 Tahun 2025, the economic growth rate of Aceh Besar Regency in 2024 reached 4,95 percent, which is higher than the provincial average. The local economic structure remains dominated by the agriculture, forestry, and fisheries sectors, which contribute 21,02 percent to the Gross Regional Domestic Product (GRDP), supported by the construction sector at 19,24 percent. Furthermore, 2024 Village Development Index (*Indeks Desa Membangun, IDM*) data indicate that most villages in this region still rely on agriculture as their primary source of livelihood. This situation demonstrates that the agricultural sector not only

serves as the backbone of the economy but is also key to achieving sustainable agricultural development and economic resilience for communities in the transmigration area. In the context of agropolitan area development, the presence of flagship commodities is a critical factor in enhancing regional competitiveness and driving sustainable economic growth (Rustiadi & Pranoto, 2007; Pantouw et al., 2018). Therefore, identifying appropriate leading commodities is a strategic step toward supporting economic transformation based on local potential.

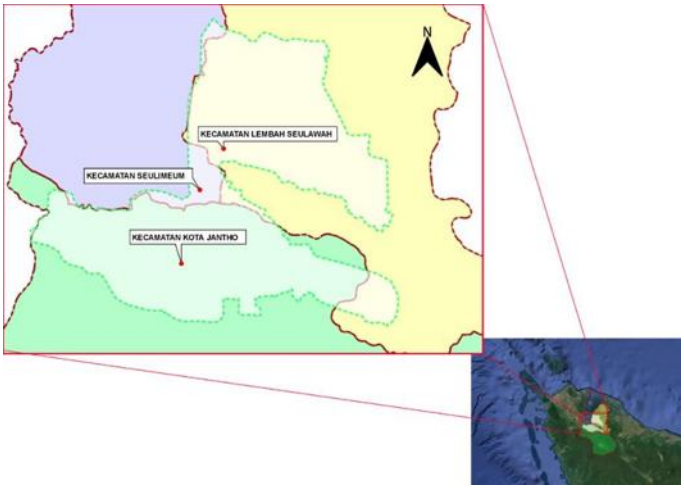


Figure 1. Transmigration Area Plan of Jantho
Source: Kepmen Transmigrasi No 71 Tahun 2018

Based on data from the 2024 Rural Potential Statistics and the Integrated Map Information System for Transmigration Areas (SIPUKAT), rice has long been the dominant commodity cultivated by communities in several villages, such as Jantho Baru, Aweek, Bueng, and Jantho. However, this dominance has not been accompanied by optimal and sustainable economic performance. From a physical standpoint, limited irrigation infrastructure is the primary constraint, as the dams at Jantho Baru and Panca have been damaged by sedimentation, cracks, and lack of maintenance, thereby reducing water availability for agricultural land. Consequently, farmers can plant only once a year, resulting in low productivity. Additionally, the limited area of wetland, only 1.267,23 hectares compared to 1.968,56 hectares of dryland, further affects the suitability of the land for rice cultivation (Djaenudin et al., 2002). This situation is further exacerbated by suboptimal cultivation practices and technological limitations, resulting in rice productivity in the region remaining relatively low compared to other areas in Aceh Besar Regency. Consequently, although rice is the dominant commodity, the sustainability of its development as the primary driver of the regional economy remains constrained by various structural constraints.

From an economic perspective, the challenges facing the rice commodity are also reflected in a value chain that remains short and has not yet been integrated with the agroindustrial sector. Most of the harvest is sold as dry threshed paddy without further processing, thereby severely limiting opportunities to add value (Cella & Kurniati, 2025). The lack of post-harvest facilities and the dominance of middlemen in the distribution chain weaken farmers' bargaining power and result in relatively low incomes (Dayu et al., 2023). In theory, however, agricultural commodities can be developed not only as consumer goods but also as agroindustrial raw materials capable of enhancing economic value (Swastha & Irawan, 2008). The development of value-added products such as rice flour, premium packaged rice, and other processed goods can expand the value chain and foster the emergence of new economic activities (Rohman, 2020; Fitriani et al., 2021). The absence of downstream processing prevents rice from generating an optimal multiplier effect for the regional economy. This situation aligns with the view of Hayami and Ruttan (1985), who state that the agricultural sector without product differentiation tends to experience value stagnation. Therefore, a shift in development strategy is needed toward commodities that are not only productive but also

have significant potential for development within agro-industrial systems and food-based entrepreneurship.

In this context, the plantation sector emerges as a more promising alternative for development. According to the 2012–2032 Regional Spatial Plan (*Rencana Tata Ruang Wilayah* or RTRW) of Aceh Besar Regency, plantation areas dominate the landscape, covering approximately 5.859 hectares, indicating ecological support and land suitability for the development of perennial crops. The characteristics of plantation crops, relatively more adaptable to dryland conditions and with value-added potential through further processing, make this sector strategic in driving regional economic transformation. Additionally, the development of plantation-based commodities offers opportunities to strengthen the agroindustry and local entrepreneurship. However, to date, no comprehensive study has been conducted to determine the most suitable flagship plantation commodities for development in the Jantho Transmigration Area. Based on these issues, this study aims to analyze and identify potential leading commodities in the Jantho Transmigration Area using a Focus Group Discussion (FGD) approach combined with the Analytical Hierarchy Process (AHP). This study is expected to contribute to the development of a multi-criteria-based method for determining priority commodities and to serve as a foundation for formulating local economic development policies that support the community's economic resilience in a sustainable manner.

LITERATURE REVIEW AND HYPOTHESIS FORMULATION

Indonesia's transmigration program has shifted its focus from merely serving as a tool for population redistribution to becoming a more comprehensive regional economic development strategy. Transmigration areas are no longer viewed as subsistence regions, but rather as new growth hubs based on local potential. The "Transpolitan" concept emphasizes integrating transmigration areas with technological innovation, market connectivity, and industrial downstreaming within an agropolitan framework (Sukarno, Siregar, & Yustina, 2023). Empirically, internal migration has also been shown to contribute to regional economic growth through increased human capital and labor productivity (Vidyattama, 2016). However, the success of transmigration area development is not determined solely by economic factors but also by social resilience, where the interaction between government physical support and community social capital is a determining factor in the area's economic sustainability (Quetulio-Navarra et al., 2017).

In the context of rural development, the paradigm has shifted from a top-down approach to an endogenous development based on local resources (Rustiadi, Saefulhakim, & Panuju, 2018). The implementation of the Undang-Undang Desa strengthens the role of villages in economic development through the Village Fund (Ningsih, 2021), while transmigration areas serve as catalysts for innovation, disseminating knowledge to surrounding regions (Purba & Saleh, 2023). Rural economic efficiency is also heavily determined by village-city linkages, particularly through infrastructure connectivity that supports the distribution of agricultural products (Darmawanto et al., 2022). Within this framework, the identification of leading commodities is a critical aspect grounded in the theories of comparative and competitive advantage, where comparative advantage is determined by resources and agroclimatic conditions, while competitive advantage is built through innovation and supply chain efficiency (Hendrita & Supriyanti, 2023). Methodologically, the identification of leading commodities generally employs approaches such as the Location Quotient (LQ) and Shift-Share Analysis (SSA) (Rustiadi et al., 2018; Bappeda Aceh, 2024); however, at the local level, a multi-criteria approach is required that encompasses agroecological, agronomic, economic, and socioecological aspects (Ibal, 2023).

In the rural economy system, the plantation sector plays a strategic role as a driver of the regional economic growth, providing long-term economic value and income stability for farmers compared to seasonal food crops. Bappeda Aceh Province (2024) notes that the plantation sector is the main contributor to the agricultural sector's GRDP in Aceh, supported by the geographical conditions of Aceh Besar, which features a wide range of agroclimatic variations suitable for the

development of plantation crops. Land suitability is a key factor in the success of commodity development, where factors such as rainfall, temperature, slope, soil pH, and elevation determine the level of regional suitability (Djaenudin et al., 2002). Plantation crops generally exhibit high adaptability and do not require intensive intervention, making them well-suited to the characteristics of farmers in resettlement areas that are still in the early stages of capacity development.

From an economic perspective, the value added of commodities is largely determined by the value chain, where farmers often find themselves in a disadvantaged position due to the dominance of intermediaries and the length of distribution channels. This results in the majority of the value added being captured by downstream actors, necessitating the strengthening of the value chain through improvements in production processes, processing, product quality, and distribution efficiency to enhance farmers' well-being (Trienekens, 2020). Overall, the literature indicates that the development of flagship commodities in transmigration areas requires integrating agroclimatic, social, and economic factors; however, there remains a lack of studies that specifically integrate a multi-criteria approach to identify leading commodities in the Jantho Transmigration Area. Consequently, this study employs Focus Group Discussions (FGD) and the Analytic Hierarchy Process (AHP) to address this gap.

RESEARCH METHODS

This study employs a mixed-methods approach that simultaneously integrates qualitative and quantitative methods to gain a comprehensive understanding of the current conditions, potential, and future development direction of the Jantho Transmigration Area in Aceh Besar Regency. This approach was chosen because it combines in-depth exploration through qualitative methods with the precision of quantitative analysis. The research was conducted in 2025 in the Jantho Transmigration Area, which encompasses Jantho City Subdistrict, Lembah Seulawah Subdistrict, and part of Seulimeum Subdistrict. Data collection was conducted using both secondary and primary sources to fully describe the area's potential and challenges.

Secondary data included the Aceh Besar Regional Spatial Plan (RTRW) for land suitability analysis, data from the Central Statistics Agency on commodity production and socioeconomic conditions, Rural Potential Statistics for identifying the commodities cultivated by the community, and Village Development Index data. Meanwhile, primary data was obtained through participatory methods, including field observations, interviews, and Focus Group Discussions (FGDs). Observations were conducted to assess the area's conditions through visual documentation, while interviews were conducted with key informants purposively selected, including local government officials, regional administrative staff, technical agencies, local economic actors, and migrant communities.

The determination of priority commodities was carried out through *Focus Group Discussions (FGDs)* involving various stakeholders to reach a consensus on the potential and direction of commodity development. The FGD was held on October 14, 2025, at the Hall of the Aceh Besar Regency Department of Manpower and Transmigration, and the results were used as the basis for identifying viable commodity alternatives and integrating the perspectives of various actors. Subsequently, a quantitative analysis was conducted using the *Analytical Hierarchy Process (AHP*) method to systematically determine the priority of flagship commodities (Saaty, 2008). There were 30 respondents, consisting of FGD participants selected using *purposive sampling*, considering that these parties, possess knowledge, experience, and a direct stake in the management and development of commodities in the Jantho Transmigration Area. Several steps were undertaken in this AHP process (Marimin & Maghfiroh, 2010), namely:

1. Determining the objectives, criteria, and commodity alternatives, which were organized into a hierarchy;
2. Next, the criteria were weighted using pairwise comparisons (Saaty, 2008) for each predefined hierarchy. This weighting was conducted on a scale ranging from 1 to 9. These

values represent the level of importance, in this context referring to the priority commodities.

3. Distributing questionnaires to respondents during the FGD process;
4. Compiling a pairwise comparison matrix and calculating the average results, and
5. Next, the validity of the pairwise matrix values was tested by calculating the consistency ratio (logical consistency) of various criteria using the consistency ratio in Expert Choice software version 11.0.

Determining *decomposition* was also carried out as one of the initial steps in the AHP method, which is a way to solve problems in the form of interrelated hierarchies (Zulhadi et al., 2017). In this context, it relates to the objectives, criteria, and alternatives for determining leading commodities. This was done to provide a systematic visual overview of the applied methodological flow; the following presents a decomposition scheme for determining leading commodities in the Jantho Transmigration Area.

RESULTS AND DISCUSSION

The initial identification in this study focused on mapping the potential of leading commodities in the Jantho Transmigration Area, based on field observations and interviews with various stakeholders. Spatially, the direction of commodity development in this area is strongly influenced by land-use patterns, with the plantation sector dominating over food crops. According to the 2012–2032 Regional Spatial Plan (RTRW) document for Aceh Besar Regency, the area of plantation cultivation reaches approximately 5,859 hectares, which is relatively larger compared to the limited and scattered area of rice fields. This situation indicates that, from an ecological and land availability perspective, the Jantho region is better suited to the development of perennial crops than to food crops such as rice, which are highly dependent on water availability and irrigation infrastructure. Field observations and interviews with the community and stakeholders further support these findings, as the dominant plantation commodities include areca nut, candlenut, and cocoa crops, which have been cultivated for a long time and exhibit high adaptability to local conditions. Thus, the three main commodities that serve as the initial focus of this study are candlenut, cocoa, and areca nut, which are subsequently analyzed through a participatory approach (FGD).

Furthermore, the involvement of stakeholders, such as local governments, technical agencies, agricultural extension workers, and local economic actors, is crucial in the FGD process to achieve a shared understanding regarding the potential and direction of sustainable commodity development in the region. Several key points were discussed in the FGDs, including agroclimatic conditions, socio-economic factors, value chain structures, the application of appropriate technologies, and products commodity derivatives. The focus group discussion (FGD) yielded various insights and perspectives from participants on the potential, challenges, and direction of commodity development in the Jantho Transmigration Area, providing a basis for identifying sustainable leading commodities. Stakeholders and agricultural practitioners present at the FGD shared the view that there is a need for economic support crops, specifically plantation crops, in addition to food crops. Candlenuts, areca nuts, and cocoa were assessed as having more promising development prospects than other plantation crops, which are generally grown only as backyard crops. Representatives from the Aceh Besar District Agriculture Office also emphasized that these three commodities have been part of the local community's traditional knowledge and have been cultivated for generations, with candlenuts and cocoa demonstrating higher market potential and economic value. Land suitability and agroclimatic conditions were also key considerations in determining the feasibility of developing these commodities. This aligns with input from representatives of the Regional Development Planning Agency of Aceh Besar Regency, who emphasized the importance of technical and ecological studies to ensure that development is not solely based on economic potential but also on environmental sustainability. Therefore, a further

analysis of these three commodities was conducted using the AHP method to determine the region's flagship commodities.

Before conducting the AHP analysis, the decomposition was determined through a hierarchical structure; the parameters used not only covered physical land aspects but also considered economic feasibility and social-institutional aspects. A detailed visualization of this decomposition flow is shown in the following diagram.

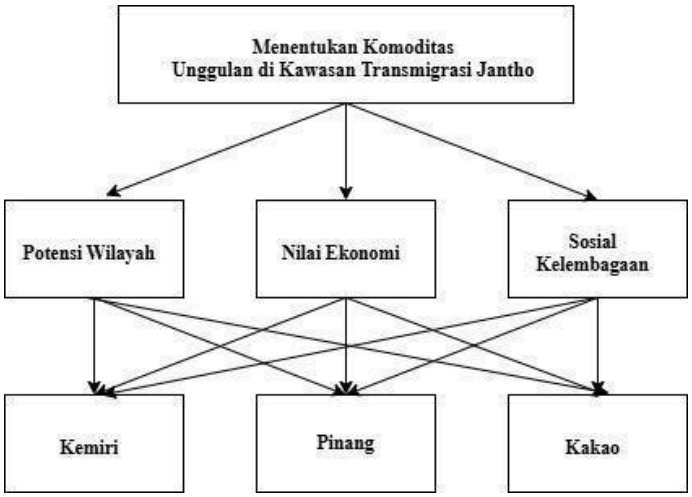


Figure 2 Decomposition Diagram
Source: Analysis Results (2025)

Subsequently, data collection was conducted by distributing questionnaires to FGD participants, with an initial sample size of 30 respondents. After data cleansing, the number of respondents used in the analysis was reduced to 20. This number was deemed sufficient to meet the AHP method's criteria, as the primary emphasis lies on the quality and relevance of the respondents. The questionnaire data were then processed using Expert Choice software version
11.0 to obtain priority weights and test the consistency of the assessments. The test results showed that all comparison matrices had a *consistency ratio* within acceptable limits, so the analysis results were deemed methodologically valid.

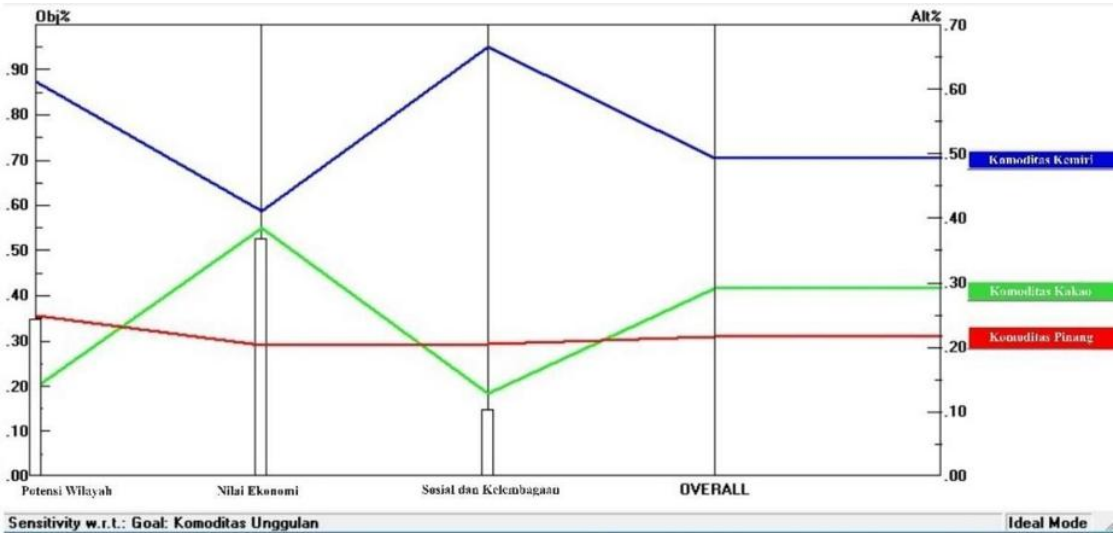


Figure 3. AHP Analysis Results for Leading Commodities
Source: Data Analysis (2025)

Based on the AHP analysis, candlenuts were identified as the flagship commodity in the Jantho Transmigration Area. These results indicate that candlenuts have the highest priority level among other commodities in terms of land suitability, economic potential, and social and institutional support. The selection of candlenuts as the leading commodity serves as a crucial foundation for formulating the area's development strategy. In the context of sustainable agricultural development, candlenuts offer an advantage over food crops such as rice, which were previously the community's dominant crops. This is evidenced by high agroclimatic suitability, where factors such as rainfall, temperature, slope, soil pH, and elevation fall within the optimal range for candlenut growth. Additionally, candlenuts are perennial plants that are adaptable to environmental variations and do not require intensive care, making them better suited to the social conditions and the capacity of farmers in the transmigration area. The following are the results of an analysis regarding the suitability of agroclimatic parameters for the candlenut commodity:

Table 1 Agroclimatic Parameters for Candlenuts

Parameter	Candlenut Requirements	Conditions in the Jantho Area
Soil pH	5,5 – 7	3,5 – 6,5 (predominantly Latosol & Podsol)
Slope	0 – 15%	0 – >15% (±60% flat terrain 0–15%)
Annual rainfall	1.100 – 3.500 mm/year	±1.400 – 2.300 mm/year
Air temperature	20 – 27°C	28,30 – 32,22°C
Elevation	0 - 1.200 masl	<200 masl

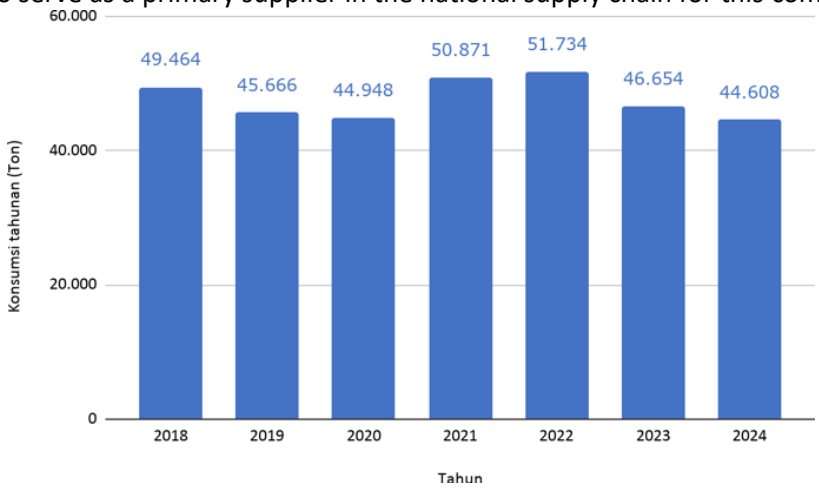
Source: Processed data (2025)

This is indicated by a high level of agroclimatic suitability, where factors such as rainfall, temperature, slope, soil pH, and elevation fall within ranges that support candlenut growth. Geographically, the Jantho Transmigration Area is dominated by lowlands with elevations <200 m above sea level and varying slopes; approximately 60% of the area is classified as gentle (0–15%) and remains suitable for the cultivation of annual crops. The area's thermal conditions exhibit characteristics of a wet tropical climate, with average temperatures ranging from 28,30°C to 32,22°C, which fall within the adaptive range for candlenut growth. Annual rainfall ranging from 1.400–2.300 mm/year also supports water availability for plantation crops. Meanwhile, the dominance of Latosol and Podsolik soils with pH 3.5–6.5 indicates low to moderate fertility, yet they remain suitable for the cultivation of perennial crops with adjustments in land management practices. Interviews with agricultural extension officers from the BPP in Kota Jantho Subdistrict also revealed that candlenut is more of *a* "plant-and-forget" *crop* requiring minimal intervention, making its cultivation highly suitable for the local community's agricultural system in the region.

Candlenut provides long-term income stability for the community compared to seasonal food crops. This supports the principle of sustainable development from an economic perspective, as the community gains greater financial resilience against seasonal fluctuations, thereby enhancing households' ability to plan for a more stable economic future. Additionally, this commodity is integrated into the local trade system in the Jantho Transmigration Area, where traders at the Jantho People's Market purchase the produce, which serves as the hub of the community's economic activities. At the local level, the commodity is generally marketed in a form that has undergone initial processing by local labor, particularly from Jantho Baru Village. This pattern indicates that the local supply chain is functioning effectively, although it remains at a basic stage.

The existence of the traditional market as the primary distribution hub is a key factor in sustaining the production cycle and strengthening household economic circulation. Additionally, the presence of initial processing activities indicates that *value-added* creation is beginning to take shape within the region, though further development is needed to enhance economic scale and efficiency.

At the regional level, demand for this commodity shows a stable and promising trend. Based on 2024 data from the Central Statistics Agency, the average consumption of peeled candlenuts in Aceh Province was 4,2 grams per capita per week, or 204,6 grams per capita per year. With the estimated population, total domestic demand is projected to reach 1,150.5 tons per year. This high level of consumption indicates that the commodity plays a significant role both in household consumption and as an input for the food processing industry. On the other hand, total candlenut production in Aceh Province reached 8.544 tons, resulting in a significant surplus over regional demand. This situation creates opportunities to expand distribution into other regions and indicates that Aceh has the potential to serve as a primary supplier in the national supply chain for this commodity.



Figue 4. Graph of Annual Candlenut Consumption by Household Consumption per Province
Source: Central Statistics Agency 2024, data processed

On a national scale, demand patterns also show a relatively stable trend. Based on Central Statistics Agency data (2024), per capita consumption of peeled candlenuts in Indonesia reached 3,2 grams per week or approximately 156,53 grams per year. Based on the total national population, the estimated demand is around 44.600 tons per year. This high demand indicates that the commodity holds a strategic position across sectors such as the food industry, cosmetics, and essential oil processing. This situation reinforces the view that the commodity has strong market sustainability and significant long-term economic potential.

Table 2. Economies of Scale for Commodities Based on Land Area

Commodity	Potential Land Area (ha)	Productivity (kg/ha)	Price (Rp/kg)	Potential Production Value (in Thousands)
Candlenut	3.580,915	624,05	40.000	89.386.800,2

Source: Central statistics agency 2024, data processed

From an economic perspective, this commodity also demonstrates significant production value potential if developed optimally. With available potential land area, productivity levels, and relatively stable market prices, this commodity has high economic value and can make a significant contribution

to the regional economy. Furthermore, when considered in relation to national consumption, the high demand that cannot be fully met by local production indicates opportunities for further development, whether through intensification or extensification. This suggests that the commodity possesses strong economic competitiveness and is relevant for development within the framework of commodity-based transmigration area development.

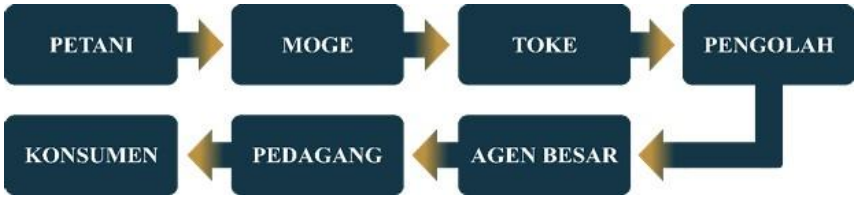


Figure 5. Supply Chain Flow of Candlenut Commodities in the Jantho Transmigration Area
Source: Analysis Results (2026)

Table 3. Value Chain of Candlenut in the Jantho Transmigration Area

Actor	Function	Purchase Value	Sales Value
Farmers	Producer of raw candlenuts (unprocessed, wet)	Rp7.000	Rp8.000
Middlemen/Small-scale collectors	Collect and purchase candlenuts from farmers within the village	Rp8.000	Rp9.000
Wholesaler	Purchases candlenuts from individual small-scale farmers and processes them simply (conventional drying)	Rp9.000	Rp10.000
Processor	Purchases and processes candlenuts from middlemen into simple derivative products	Rp10.000	Rp35.000 (Whole Peeled) Rp27.000 (Split & Peeled) Rp1.100 (Shells)
Major Agent	Distributes candlenut products to small retailers	Rp35.000	Rp40.000
Market/ Seller	Selling and marketing products at local and central markets	Rp40.000	Rp45.000 - Rp60.000

Source: Analysis results (2025)

In relation to the value chain, this massive economic potential is supported by an established supply chain structure, from upstream to downstream, where the distribution of candlenut value added in the Jantho Transmigration Area involves several key actors. The value chain begins with farmers as the primary producers who plant, care for, and harvest candlenuts from their orchards; thus, the final product quality is heavily influenced by cultivation conditions and post-harvest handling. From the farmers, the commodity is then transferred to middlemen or small village collectors who store limited quantities before passing it on wholesaler, who act as larger-scale collector-traders with greater capacity in terms of capital and storage volume as well as distribution networks. Next, the candlenuts are distributed to processors, who add value by processing them into

derivative products such as peeled candlenuts, powder, and candlenut oil. These processed products are then marketed through major agents who distribute them to various regions and maintain supply stability, before finally reaching retailers, whether through wholesalers in traditional markets, spice shops, or online sellers with more flexible access to end consumers. In detail, this flow also illustrates the difference between purchase prices and selling prices at each stage, where at the upstream level, farmers sell raw candlenuts for Rp8.000, which are then purchased by middlemen and passed on to wholesalers, with a relatively small price difference of around Rp1.000 at each intermediary level. However, a significant jump in value occurs during the processing stage, where candlenuts are purchased for Rp10.000 and processed into derivative products, such as whole peeled candlenuts, valued at Rp35.000. This value increases further at the final distribution stage, where large distributors channel the product to the market, with a selling price to end consumers ranging from Rp45.000 to Rp60.000 per kilogram. Overall, this pattern indicates that as the value chain moves downstream, the economic value of the commodity increases significantly, with the highest value accumulation occurring at the processing stage. This descriptive illustration shows that the price increase from farm to market is heavily influenced by downstream processing and marketing functions within that value chain.

Thus, the overall analysis indicates that the Jantho Transmigration Area has strong potential for the development of the candlenut commodity, as assessed from agroclimatic, socio-economic, and established value structure perspectives. The suitability of land and climate conditions provides an ecological foundation supporting the sustainable development of plantation commodities, while stable demand at the local, regional, and national levels indicates relatively secure and sustainable market opportunities. However, despite high production and demand potential, the value chain's lengthy structure, dominated by intermediaries, suggests that the majority of value added has not yet been fully captured by primary producers. These conditions indicate the need to strengthen downstream systems, improve distribution efficiency, and enhance the capacity of local economic institutions so that commodity development is not only production-oriented but also focused on increasing value added and the well-being of farmers in the transmigration areas in a sustainable manner.

CONCLUSION

The Jantho Transmigration Area still faces limitations in the development of rice as the primary sector, particularly in irrigation infrastructure, productivity, and a value chain that remains unintegrated with agroindustry. These conditions result in low value-added output and an inability to optimally drive the region's economic growth. Through the FGD and AHP approaches, this study found that candlenut is a potential flagship commodity in the Jantho Transmigration Area. This commodity has good agroclimatic suitability, is adaptable to dryland conditions, and is supported by an established supply chain structure, demonstrating significant value-added potential through processing.

The implications of these findings suggest that the development of candlenut is not only relevant as a strategy to diversify away from dependence on food commodities but also as a key driver of sustainable agricultural development, agroindustry, and food-based entrepreneurship in transmigration areas. Strengthening downstream processing through the processing of candlenut-derived products, enhancing farmers' capacity, and developing local economic institutions are strategic steps to increase value added and shorten the distribution chain, which has long beendominated by intermediaries. In the context of food security and regional economic resilience, the development of this commodity also contributes to the stability of farmers' household incomes and strengthens the region's position within regional and national supply chains. However, this study has limitations in its scope of analysis, which does not yet include an assessment of business viability, a cluster-based kemiri agroindustry development model, or integration with food security and climate change policies. These limitations indicate that the study remains focused on identifying leading commodities and conducting an initial value chain analysis, and thus has not yet comprehensively

described the implementation and sustainability aspects of candlenut development on a broader agroindustrial scale.

Acknowledgements

This study was conducted as part of the Patriot Transmigration 2025 program, administered by the Ministry of Transmigration. The authors wish to express their profound gratitude to the Ministry of Transmigration for the funding provided. All opinions, findings, and conclusions presented in this paper are strictly those of the authors.

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