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Reevaluating plantation commodities for sustainable economic growth in Balantak District, Banggai Regency

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ABSTRACT

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Introduction: The plantation sub-sector is one of the agricultural sectors that occupies an important position in supporting the regional economic order, especially the Banggai Regency area because it is a source of raw materials for the feed and clothing industry. So, it was carried out to evaluate community income on plantation commodities in Balantak District. **Methods:** This research uses quantitative descriptive analysis method with Location Quotient and Shift Share Analysis approach and income analysis. **Results:** The results obtained are the superior commodity of plantation crops in Balantak District obtained 2 types of plants, namely clove and nutmeg plants, with LQ values greater than one (> 1) and positive SSA (+). Clove crops are found in 7 villages, namely Talima A village, Talima B village, Balantak, Luok village, Boloak village, Dale-Dale, and Talang Batu village. Furthermore, Nutmeg plants are found in 3 villages/sub-districts, namely, Dolom village, Padang village, and Mamping village. Furthermore, the income analysis of superior plantation crops, namely cloves and nutmeg in Balantak sub-district, obtained a value of 1.5 with the criteria of R/C ratio > 1 , which means that farming is profitable and feasible to develop in Balantak District. **Conclusion:** The results of this study form the basis of recommendations for local governments to manage and focus more on superior plantation crops that can support economic growth in Balantak District, Banggai Regency.

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INTRODUCTION

Agricultural development is a complex process that reflects social change, including shifts in national structures, community attitudes, and institutions. The purpose of agricultural development is to encourage economic growth, increase income, and alleviate poverty (Etuk & Ayuk, 2021), which ultimately improves living conditions both materially and spiritually (Rorong, 2022; Arora et al., 2023). Furthermore, Ignjatović et al., (2024) stated that the concept of development is to increase the production and quality of competitive agricultural products, expand employment and business opportunities, increase the income and welfare of farmers and their families through agribusiness (Maulidia & Yulistiyono, 2020), improve the skills and education of the farming community and encourage rural economic development through a sustainable agribusiness system (Fetra et al., 2021; Tshikovhi et al., 2023). Apart from that, the plantation sector has a competitiveness that can increase the income of farmers/communities from its economic value (Ebissa et al., 2023), so that the welfare and improvement and development of an area can be realized quickly and well (Setiawan, 2012; Ummah et al., 2022).

According to Sibhatu (2023), the plantation subsector is an important component of the economic landscape in Banggai Regency, serving as a source of raw materials for the feed, clothing, and food industries (Gan et al., 2023). The productivity of plantation crops is influenced by people's willingness to cultivate (Egasari et al., 2017), especially among the population of the Balantak District. The district shows significant potential in the plantation sector, which can have a positive impact on social and economic development, as well as improving people's livelihoods, and local income (Syahza, 2019; Nugroho et al., 2022). Therefore, further studies are needed to identify competitive and superior commodities in the agricultural sector (Kainyande et al., 2022), especially in the plantation sub-sector in the Balantak District of Banggai Regency. The identification of leading commodities varies according to a region's geographical, social, and economic context, necessitating region-specific analysis. Leading commodities are those most widely produced and economically competitive, serving both local and export markets. Previous studies demonstrate that such analyses enhance the clarity and precision of economic development goals at the district level. The value of district-level studies

lies in their use of detailed, village-level data, which improves the accuracy of results. This approach not only identifies commodities that drive local economic growth but also reveals previously unrecognized products with significant potential to meet local demand and expand to national markets.

The development of the plantation subsector in Balantak District should refer to the superior commodity approach. Because, according to Hidayanto (2013); Khatun *et al.*, (2020), Syahza *et al.*, (2022) a leading plantation commodity industry policy will provide adequate pluses and make a high contribution to the community in Balantak District. Leading commodities are commodities that are worth cultivating because they provide benefits to farmers both physically, socially, and economically (Saptana *et al.*, 2022; Murniati *et al.*, 2022). Furthermore, a commodity can be said to be biophysically, socially feasible, if the developed commodity is cultivated by its agroecological zone (Katili *et al.*, 2023), and provides business opportunities, and can be accepted by the local community (Bangun, 2020) so that it has an impact on employment for the community (Sombolayuk & Bakar, 2023). Meanwhile, economically feasible means the commodity is profitable (Amili *et al.*, 2020). Furthermore, according to Doharto *et al.*, (2024); Novita *et al.*, (2022) what is meant by superior commodities is a mainstay commodity that has a strategic position to be developed in an area. This strategic position is based on technical, socio-economic, and institutional considerations (Urbano *et al.*, 2019). According to Sutrisno, (2012), one of the efforts that can be made to improve the economy in a region is to analyze or explore sectors that do have comparative advantages and have competitive advantages (Rustiadi *et al.*, 2011; Sariyani *et al.*, 2023).

Comparative advantage is an advantage possessed by a region where the sector can meet domestic needs and the rest can be exported to other regions (Katili, 2020). Meanwhile, competitive advantage is an advantage possessed by a region where the sector can compete (Parmadi *et al.*, 2018; Katili *et al.*, 2023). The economic sector that affects regional development in Banggai Regency is the plantation sub-sector such as Clove, Coffee, Kapok, Nutmeg, Cocoa, Pepper, Tobacco, Coconut, Palm Oil, candlenut, and Cashew which are spread across 23 Districts (Central Statistics Agency Banggai, 2022). However, the plantation commodities in the Balantak District are cloves, nutmeg, coconut, cashew, and cacao (Agriculture and Plantation Extension Agency Balantak, 2023). The existence of a plantation commodity provides extensive economic, social, and environmental benefits. Therefore, the development of the plantation subsector in the Balantak District must refer to sustainable agricultural development to meet the needs of the community in the future.

An understanding of these leading commodities is very important to assist the local government in formulating a strategy for developing plantation crops in Balantak District, Banggai Regency. This study aims to analyze superior plantation commodities to support regional economic development and increase community income in Balantak District, Banggai Regency.

METHODS

Research location

This research was conducted in 2023 in Balantak District, which includes 10 villages and 3 sub-districts with an area of 196.46 km², with a population of 5,976 people (Central Statistics Agency of Balantak District, 2023). Geographically, the district is bordered by North Balantak District to the north, South Balantak and Mantoh sub-Districts to the south, Lamala District to the west and east (Figure 1).

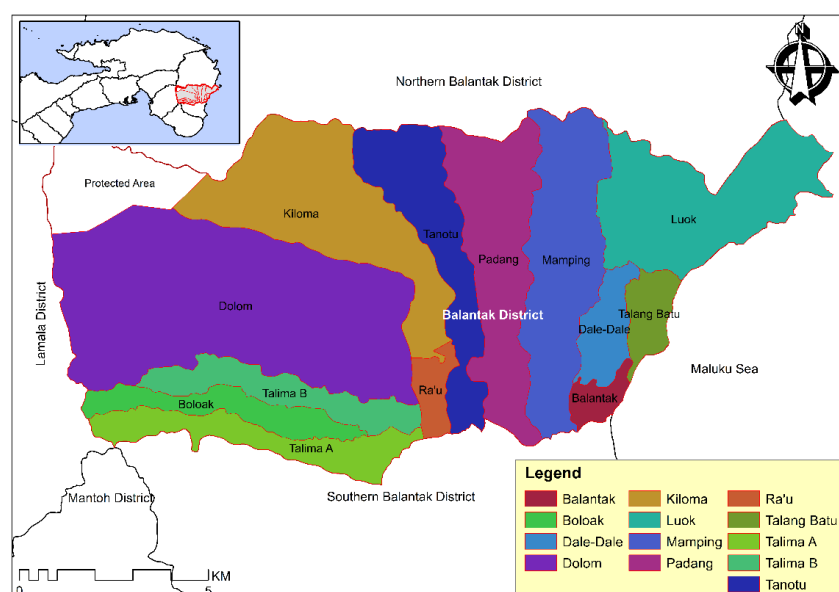


Figure 1. Research Location

Data collection

The type of data used in this research is secondary data such as Balantak District plantation commodity production data. Secondary data is collected through literature studies and obtained from offices or agencies such as the Balantak District Agricultural Extension Center and the Central Statistics Agency of Banggai Regency in 2018-2023. Primary data were collected through direct field interviews with relevant stakeholders. This study employed purposive sampling, selecting participants based on specific criteria to ensure data validity and relevance to the research objectives. From a farmer group of 261 members, 26 plantation farmers across Balantak district were surveyed as representative samples. The questionnaire addressed key factors, including land tax, labor, fertilizer use, selling prices, and farmers' income. Additionally, direct observation provided contextual data, allowing for the verification and validation of information from other sources and enabling comprehensive and accurate conclusions about the studied issues.

Data analysis

The data analysis used is to determine the leading commodities and the amount of income of plantation commodities in Balantak District. Details are described as follows:

Location quotient (LQ) analysis

The data used for LQ analysis is the production data of plantation commodities in Balantak District villages in 2023. LQ analysis is one of the indirect approaches used to determine whether a plantation sector is a base or non-base sector (Rustiadi et al., 2011; Katili et al., 2024). The LQ index equation is formulated as follows:

$$LQ_{ij} = \frac{X_{ij}/X_i}{X_j/X \dots}$$

Description: Lq_{ij} = Location Quotien; X_{ij} = Indicator value of j th commodity production in region i ; X_i = total production of all commodities in the village; X_j = total production of the j th commodity in the district; X = total production of all commodities in the district.

If the calculation results in the above formulation results in: $LQ > 1$ means that the commodity is a base or a source of growth. Commodities have a comparative advantage, the results can not only meet the needs of the region concerned but also can be exported outside the region; $LQ = 1$ the commodity is classified as non-base, has no comparative advantage. Its production is only enough to meet the needs of the region itself and is not able to be exported; $LQ < 1$ The commodity is also non-base. The production of a commodity in a region cannot meet its own needs so it needs to be supplied or imported from outside.

Shift share analysis (SSA)

Shift Share Analysis (SSA) is one of the techniques to analyze the competitive advantage of a commodity. This analysis looks at how the development of a commodity in a particular area whether it has increased or not. SSA analysis is used to determine commodities in the plantation crop sub-sector of Balantak District in 2018 and 2023 that have a competitive advantage, with positive (+) SSA criteria. Mathematically, the SSA method is formulated as follows (Rustiadi et al., 2011; Katili et al., 2024):

$$SSA = \underbrace{\left(\frac{X \dots (t1)}{X \dots (t0)} - 1 \right)}_a + \underbrace{\left(\frac{X_i(t1)}{X_i(t0)} - \frac{X \dots (t1)}{X \dots (t0)} \right)}_b + \underbrace{\left(\frac{X_{ij}(t1)}{X_{ij}(t0)} - \frac{X_i(t1)}{X_i(t0)} \right)}_c$$

Description: a.=share component; b.=proportional shift component; c.=differential shift component; $X_{..}$ =aggregate regional commodity production value; X_i =total value of commodity production in the i -th sub-district unit; X_{ij} =value in the i -th region and j -th production; $t1$ =end year point; $t0$ =initial year point.

Income analysis of plantation farmers

Income is the difference between revenue and all costs incurred (Soekartawi, 2017). To calculate farm income, what must be known is all expenses and receipts during the farm run within a specified time. To calculate farm income, you can use the formula:

$$Pd = TR - TC$$

Furthermore, the efficiency analysis of decision criteria was carried out according to Soekartawi (2016), R/C analysis is used to determine the efficiency or feasibility of farming. mathematically can use the following formula:

$$R/C \text{ Ratio} = TR : TC$$

Description: Pd = Revenue; TR = Total Revenue; TC = Total Cost; R/C Ratio = feasibility or business efficiency. After completing the calculation, a decision can be made. Decision criteria, if: $R/C > 1$ means Efficient or profitable; and if, $R/C = 1$ means Break-even; and $R/C < 1$ = Inefficient or loss.

RESULTS AND DISCUSSION

Location quotient analysis of plantation commodities of Balantak District

The data used in calculating the Location Quotient (LQ) value of plantation commodities is the production of each plantation commodity in 2023 with a total of five plantation commodities in Balantak District, Banggai Regency. An area is said to have a strong base on plantation commodities if the LQ value > 1 , otherwise if the LQ ≤ 1 then it is said not to be a strong base (Sariani et al., 2023; Katili et al., 2024). The results of the LQ analysis of plantation commodities in 13 Villages/sub-districts have their respective base commodities. The most basic commodities are Clove plants obtained in 8 villages/sub-districts (Talima A, Talima B, Dolom, Balantak, Luok, Boloak, Dale-Dale, Talang Batu), then Cocoa plants obtained in 6 villages/sub-districts (Talima A, Talima B, Dolom, Kiloma, Rau, Tanotu), and Cashew plants obtained in 6 villages, namely (Talima A, Talima B, Dolom, Kiloma, Rau, Luok) and Coconut plants obtained in 5 villages/sub-districts, namely (Tanotu, Padang, Mamping, Balantak, Dale-Dale), and Nutmeg plants obtained in 3 villages (Dolom, Padang, Mamping). More details on plantation crop commodities that are the basis in the Balantak District of Banggai Regency can be seen in Table 1.

Table 1. Results of LQ calculation of plantation crops in Balantak District

Villages/ sub-districts	Plantation Crops Balantak District					LQ Result Description
	Clove	Nutmeg	Coconut	Cocoa	Cashew	
Talima A	2.48	0	0.92	2.01	12.47	Clove. Cocoa. Cashew
Talima B	2.71	0	0.9	2.99	8.81	
Dolom	2.29	3.49	0.83	4.88	26.29	Clove. Nutmeg. Cocoa. Cashew
Kiloma	0.7	0	1	2.08	3.08	Cocoa. Cashew
Rau	0.54	0.33	0.95	5.23	1.77	
Tanotu	0.39	0.19	1.01	2.09	0.86	Coconut. Cocoa
Padang	0.67	2.57	1.01	0.27	0	Nutmeg. Coconut
Mamping	0.65	2.16	0.02	0.14	0	Nutmeg
Balantak	1.09	0.48	0.02	0.1	0	Clove
Luok	3.31	0	0.91	0	17.91	Clove. Cashew
Boloak	4.11	0	0.9	0.84	0	
Dale-Dale	1.28	0.93	0.01	0.07	0	Clove
Talang Batu	8.51	0	0.76	0	0	

The Location Quotient (LQ) analysis of plantation commodities in Balantak District, Banggai Regency, reveals a comparative advantage for five key crops—cloves, nutmeg, coconut, cocoa, and cashew—across all villages and subdistricts. Among these, cloves are the most prominent, comprising 61.5% of the base cultivation area, with the highest concentration in Talang Batu subdistrict and the lowest in Balantak district; the remaining 38.5% represents non-base areas. Field data indicate that cloves are favored by farmers due to their profitability and low management costs. According to Siswanti et al. (2022), cloves significantly benefit the village economy by increasing farmer income, stimulating local economic activity through strong industrial demand, and offering substantial export potential that enhances village welfare and foreign exchange. Additionally, cloves serve as a leading commodity by generating capital, creating employment opportunities, and supporting the development of clove-based agrotourism.

Cocoa and cashew are important staple crops, with 46% of their cultivation area classified as staple and 54% as non-staple. Cocoa production is highest in Rau village and lowest in Talima A, while cashew cultivation peaks in Dolom village and is lowest in Kiloma. Both crops are valued for their ability to thrive on less fertile soils and their growing economic significance as raw materials for the chocolate and nut industries. According to Banda (2022) and Utha et al., (2023), these commodities enhance village economies by increasing farmer incomes, generating employment through processing industries, and fostering regional economic development. Additionally, cocoa and cashew add value through diverse processed products in food and beverage sectors, reinforcing their role as economic drivers.

Coconut plantations represent 18.1% of the base area, primarily in the villages of Padang and Dale-Dale, while accounting for 84.6% of the non-base area. Nutmeg plantations cover 23% of the base area, with the highest concentration in Dolom village and the lowest in Mamping village; their non-base area comprises 77% of the total villages and subdistricts in Balantak District. Base villages are defined as those capable of meeting both local and external demand for plantation crops. According to Lige et al., (2022), leading base sectors drive economic growth within their regions, and these areas also provide strategic opportunities for guiding regional economic development (Siwu, 2019).

Shift share analysis (SSA) of plantation commodities in Balantak District

The quantitative technique of Shift Share Analysis (SSA) is an analytical method that has the function of identifying the level of competitiveness of research commodities for each unit analyzed (Amaliah et al., 2020). Furthermore, Mustikaningrum and Widjonarko (2018) stated that Shift Share analysis uses production ratios to see the comparison of plantation subsector production from two different years. According to Katili and Sataral (2020); Ladonu et al. (2023) stated that basic commodities that have SSA values (+) are commodities that can compete with other commodities within the scope of one region which can be a reference for consideration in determining superior commodities in each region. Furthermore, the results of the SSA show that on average each basic commodity owned by each sub-district shows a positive growth trend, namely having a competitive value, and a negative, namely not having a competitive value (Sariani et al., 2023; Katili et al., 2024). For more details, the SSA results of the Balantak District plantation can be seen in Table 2.

Table 2. Results of SSA calculation of plantation crops in Balantak District

Villages/ sub-districts	Plantation Crops Balantak District					SSA Result Description
	Clove	Nutmeg	Coconut	Cocoa	Cashew	
Talima A	0.02	-	-0.02	-	-0.4	Clove
Talima B	0.02	-	-	-0.03	-0.31	
Dolom	-0.03	2.33	-	-0.03	-	Nutmeg
Kiloma	0.07	-	-	-0.56	-0.34	Clove
Rau	0.23	1.25	-	-0.14	-0.68	Clove. Nutmeg
Tanotu	0.07	0.43	-	-0.4	-0.52	
Padang	0.61	1.8	-	-0.72	-	Clove. Nutmeg. Coconut
Mamping	0.49	0.67	0.04	-0.85	-1	
Balantak	0.25	0.17	0.01	-0.79	-	
Luok	0.48	-	-0.04	-	-0.6	Clove
Boloak	0.03	-	0.03	-	-	Clove. Coconut
Dale-Dale	0.36	1.58	0.01	-0.58	-	Clove. Nutmeg. Coconut
Talang Batu	1.27	-	-	-	-1	Clove

Based on Table 2, it is known that 3 types of agricultural commodities of plantation crops have competitive value in Balantak District, Banggai Regency. The competitive plants are Clove Plants obtained in 12 villages, then, Nutmeg plants obtained in 7 villages, and Coconut plants obtained in 4 villages. Therefore, with the results of this analysis, the superior commodities of plantation crops in each village have been known and determined, so that the focus of development becomes directed and has an impact on economic growth in Balantak District. Focusing efforts and resources on specific areas enhances development efficiency, effectiveness, and relevance by enabling unified planning, improved coordination, and faster problem-solving. This targeted approach is crucial in community development to ensure activities align with the needs of the intended beneficiaries and yield meaningful impact.

A positive SSA value signals a region's revealed comparative advantage in producing certain commodities, allowing it to concentrate on these products, optimize resource use, and boost efficiency. Beyond cost competitiveness, this advantage enables the region to differentiate itself through unique, high-quality products, thereby creating added value and strengthening its market position. In addition, especially farmers who cultivate these commodities can optimize the commodities they cultivate, to encourage increased production which has an impact on the income of these farmers (Noviar et al., 2023).

Furthermore, the results of the Shift Share Analysis (SSA) analysis of the 5 types of plantation commodities in Balantak District obtained 3 plants that are competitively superior, namely cloves, nutmeg, and coconut. According to Sariani et al. (2023), SSA results aim to determine the description of activity performance in an area which is a tabulation of the results of Shift Share Analysis in the study area that has a positive value (+). Based on Table 2 above, Clove plants are found in 12 villages/sub-districts, with the highest positive (+) value in Talang Batu village (1.27), followed by Nutmeg plants in 7 villages/sub-districts, with the highest positive (+) value in Dolom village (2.33), and Coconut plants are found in 4 villages/sub-districts in Balantak Sub-district, Banggai Regency, with the highest positive value in Mamping village (0.04). The highest Shift-Share value for this plantation commodity signifies a strong competitive position relative to national or regional growth, indicating the sector's potential for accelerated expansion driven by the region's internal strengths. This value reflects the positive impact of the region's competitive advantage on its economic growth. Thus, villages in Balantak District with the highest values demonstrate robust plantation sector growth compared to others, attributable to their distinctive regional strengths. Thus, it can be said that Balantak Sub-district has 3 types of plantation crops as commodities that have a competitive advantage. This means that the production of plantation commodities, namely Cloves, Nutmeg, and Coconut, can meet the needs of the region and has the potential to be exported outside the region (Sambuari et al., 2015)

Determination of leading plantation commodities in Balantak District

Determination of leading plantation commodities is seen from a combination of LQ and SSA values. If the results of the LQ value > 1 and the SSA value (+) then the commodity is said to be superior cooperative and competitive (Sariani et al., 2023; Katili et al., 2024). The calculation results have been presented in Tables 3.

Table 3. Determination of Leading Plantation Commodities in Balantak District

Villages/ sub-districts	Plantation Crops Balantak District										Result Description
	Clove		Nutmeg		Coconut		Cocoa		Cashew		
	LQ	SSA	LQ	SSA	LQ	SSA	LQ	SSA	LQ	SSA	
Talima A	2.48	0.02	-	-	0.92	-0.02	2.01	-	12.47	-0.4	Clove
Talima B	2.71	0.02	-	-	0.9	-	2.99	-0.03	8.81	-0.31	
Dolom	2.29	-0.03	3.49	2.33	0.83	-	4.88	-0.03	26.29	0	Nutmeg
Kiloma	0.7	0.07	-	-	1	-	2.08	-0.56	3.08	-0.34	
Rau	0.54	0.23	0.33	1.25	0.95	-	5.23	-0.14	1.77	-0.68	Nutmeg
Tanotu	0.39	0.07	0.19	0.43	1.01	-	2.09	-0.4	0.86	-0.52	
Padang	0.67	0.61	2.57	1.8	1.01	-	0.27	-0.72	-	-	
Mamping	0.65	0.49	2.16	0.67	0.02	0.04	0.14	-0.85	-	-1	Nutmeg
Balantak	1.09	0.25	0.48	0.17	0.02	0.01	0.1	-0.79	-	-	
Luok	3.31	0.48	-	-	0.91	-0.04	0	-	17.91	-0.6	Clove
Boloak	4.11	0.03	-	-	0.9	0.03	0.84	-	-	-	
Dale-Dale	1.28	0.36	0.93	1.58	0.01	0.01	0.07	-0.58	-	-	
Talang Batu	8.51	1.27	-	-	0.76	-	-	-	-	-1	

Based on Table 3 above, it can be seen that the plantation commodities of District Balantak have 3 types of superior plants (LQ > 1 and SSA +). Clove crops are found in 7 villages, namely Talima A, Talima B, Balantak, Luok, Boloak, Dale-Dale and Talang Batu. In addition, another superior plantation crop is nutmeg, which is found in 3 villages. The villages are Dolom, Padang and Mamping. According to Pakanyamong and Katili (2023), a commodity can be said to be superior because of the concentration of activities in certain areas and the ability to provide commodity supplies to other areas. Apart from that, the commodity will also experience significant growth over time (Ardhana & Qirom, 2017).

Regions that have superior commodities will be able to carry out regional development quickly, because of the support in the regional economy (Maghfiroh, 2021), as well as being a supporting element as an input for other sectors (Dewi et al., 2021). Furthermore, Wulandari and Kemal (2016) stated that superior commodity results can make a major contribution to regional economic development. On the other hand, superior commodity products have a direct effect on being able to drive the people's economy and be able to open up employment opportunities (Amaliah et al., 2020). As an area that has superior commodities is a typology of potential areas to develop the plantation industry. Therefore, if the production of a commodity is increasing, then the marketing of the results will also increase and will have a maximum impact on economic growth in Balantak District, Banggai Regency.

Income analysis of leading plantation crops in Balantak District

The results of the previous superior commodity analysis obtained 2 leading plantation commodities (Clove and Nutmeg), so proceed with the analysis of the income of the three plantation crops to determine the rational level of income of these commodities. Income is a person's net income in the form of either cash or natural money (Marthin et al., 2018). Furthermore, Hutahaeen (2020) states that, income is also referred to as the result of the sale of the factors of production it has in the production sector which comes from sales. Meanwhile, the value of sales is determined by the number of units sold and the selling price, or more simply said income (Tandayu et al., 2022). For more details, see Table 4.

Based on the results of the calculation of nutmeg income in Balantak District, which is carried out by calculating the total revenue shared with the total production costs in a year, the results are profitable (1.5), which means this result shows that the farm is efficient and profitable so it is feasible to develop (Sambodo, 2022) Furthermore, the results of the analysis of superior commodities are carried out to calculate income to determine which superior commodities are feasible to develop in Balantak District. Based on 26 respondents related to the income analysis of two types of superior plantation crops, namely cloves and nutmeg, the R/C ratio value was 1.5, which indicates that the business is profitable because $R/C > 1$ (Soekartawi, 2016; Fadhilah & Rochdiani, 2021). Thus, cloves and nutmeg are crops that can be developed in farming in Balantak Sub-district. To keep profits increasing, nutmeg farmers in Balantak Sub-district need to pay more attention to and optimize land cultivation and maintenance of clove and nutmeg plants sustainably, and also require government support in the form of regulations that focus on both crops. According to Muslim & Darwis (2018), ways to increase production include efficient tillage techniques and cost-effective agricultural patterns, such as natural fertilization and cleaning based on local wisdom "mutual cooperation" (Mulyana et al., 2023). In addition, locally-

based cultivation techniques can also be applied to increase the production of cloves and nutmeg, which will automatically increase the economic value of farming actors. Thus, expenditure costs can be reduced as much as possible, which in turn benefits clove and nutmeg farmers in Balantak District, Banggai Regency.

Table 4. Income analysis of clove and nutmeg plantation crops in Balantak District, Banggai Regency

No.	Description	Value (IDR/ha/Year)
A Clove Crop		
1.	Dry production (700 kg/ha/year)	
2.	Price (Rp. 91.000/kg)	
3.	Revenue (1 x 2)	63.700.000
4.	Farm production cost	
	a. Fixed Cost	
	* Land tax	20.000
	* Depreciation	1.820.000
	* Average family dependents 4 people/year	13.250.000
	Total	15.090.000
	b. Variable Cost	
	* Labor/year	17.820.000
	* Fertilization/year	8.558.000
	Total	26.378.000
	c. Total Production Cost (a + b)	41.468.000
5.	Farm Income (3 – 4c)	22.232.000
	R/C Ratio	1,5
B Nutmeg Crop		
1.	Seed production (680 kg/ha/year) Flower (65 kg/ha/year)	
2.	Price of seeds (Rp. 53,000/kg), flowers (Rp. 158,000/kg)	
3.	Revenue (1 x 2)	46.765000
4.	Farm production cost	
	a. Fixed Cost	
	* Land tax	20.000
	* Depreciation	1.183.800
	* Average family dependents 4 people/year	13.250.000
	Total	14.453.800
	b. Variable Cost	
	* Labor/year	13.020.000
	* Fertilization/year	3.000.000
	Total	16.020.000
	c. Total Production Cost (a + b)	30.473.800
5	Farm Income (3 – 4c)	16.291.200
	R/C Ratio	1,5

Notes: Family dependents obtained from (KFM) minimum physical needs (265 kg/person/year) (x) 12,500 (HET Rice, National Food Agency Regulation 2024)

CONCLUSION

The leading commodities of plantation crops in Balantak District are 3 crops, namely cloves, nutmeg and coconut, with LQ values greater than one (> 1) and positive SSA (+). Clove plants are found in 7 villages/ kelurahan, namely Talima A village, Talima B village, Balantak sub-district, Luok village, Boloak village, Dale-Dale village, and Talang Batu village. Furthermore, Nutmeg plants are found in 3 villages/sub-districts, namely Dolom village, Padang village, and Mamping village. As well as Coconut plants obtained by 3 villages in Balantak District, among others, namely Mamping village, Balantak village, and Dale-Dale village. The results of the analysis of the income of leading plantation crops, namely nutmeg cloves, obtained a value of 1.5 with the criteria of R/C ratio > 1, which means that farming is profitable and feasible to develop in Balantak District, to keep profits increasing, nutmeg farming actors in Balantak District need to pay more attention and optimize land cultivation and maintenance of clove and nutmeg plants on an ongoing basis.

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