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Research Article

Potential Development of Leading Commodities in Efforts to Accelerate Rural Economic Development in Coastal Areas Riau, Indonesia

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Abstract

Background and Objective: Most of the Riau Province in Indonesia is part of the community lives on peatlands. The development of plantations has caused income inequality between regions and farmers. The research objective was to examine the potential for accelerating rural economic development through the development of leading commodities in coastal areas. **Materials and Methods:** The study was conducted through a survey with developmental research. For accurate information performed with the Rapid Rural Appraisal (RRA) method. The main commodities are based on land area, production and the number of farmers involved in agricultural activities. The potential of superior commodities in terms of farm efficiency and opportunities to create added value for farmers. **Results:** The development of the agricultural sector especially plantation commodities has caused income inequality between regions and farmers, especially with oil palm, rubber, sago and coconut farmers. The palm oil commodity has guaranteed market potential. Rubber, sago and coconut farmers face the monopsony market. The results of the study provide information on the acceleration of economic development in coastal areas through the development of plantation commodities. **Conclusion:** The results of the study can be taken into consideration for policymakers for community development in coastal areas. Suitable commodities developed in coastal areas are sago, coconut, rubber and palm oil.

Key words: Multiplier effect, coastal economy, sago, peatlands, wetland

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Data Availability: All relevant data are within the paper and its supporting information files.

INTRODUCTION

Riau Province in Indonesia is dominated (64%) by coastal areas and most of its communities live in peatlands. Riau Province comprises 11 districts/cities, 7 of which are located in the coastal zone, namely Rokan Hilir District, Dumai City, Bengkalis District, Siak District, Pelalawan District, Meranti Islands District and Indragiri Hilir District. Development implemented at the sub-national level has not been fully able to improve community welfare, especially in coastal areas. The gap between rural and urban areas is caused by development biases and distortions that favor the urban economy, creating poor and disadvantaged areas. This condition will make it difficult to promote the welfare of communities living in disadvantaged areas (especially in coastal areas).

Relevant rural development studies that have been undertaken include: The emergence of inequality in rural development is caused by the agricultural revolution and the political ecology of rural development^{1,2}. The development of economic institutions in rural areas encourages farmer productivity, which has implications for changes in farmer income³⁻⁵. The emergence of inequality in rural areas is caused by the unfair distribution of agricultural land, the proportion of smallholder farmers is very dominant in rural areas^{6,7}. Effective agricultural extension is key to improving productivity, increasing farmers' access to information and promoting more diverse sets of crops and improved methods of cultivation⁸. Agricultural businesses, especially the cultivation of plantation commodities, are related to natural resources. Therefore, potential environmental impact as a consequence of the development of plantation commodities should also be a concern.

The impact on plantation development on surrounding communities is reflected in the creation of employment and business opportunities for local communities. Plantation development in rural areas has opened up job opportunities for people who are capable of taking advantage of them. Results of research by Syahza and Asmit⁹, institutional planning for accelerating the economy in coastal areas, especially pre-eminent commodity business, is expected to be able to formulate a model that can create added value to plantation business and generate derivative products with economic value. Future plantation development will not only promote added value but also create sustainable plantation development. In an effort to empower the community, it is necessary to have integrated policy management between the private sector, the government and the community^{10,11}. Efforts to increase the productivity of farmers in coastal areas are greatly influenced by government policies and partnerships between institutions¹²⁻¹⁵.

Stakeholders in the region must monitor structural changes in the rural economic sector, the policies adopted should provide added value to coastal communities¹⁶. Economic decision making at the national and regional levels is needed to accelerate the economy in coastal areas. The selection of commodities suitable for cultivation in the wetland area contributes to community income^{17,18}.

Studies related to land use in coastal areas especially peatlands were carried out. The utilization of peatlands based on sustainable development contributes to the income of local communities. Small-scale agricultural businesses are able to maintain a balance on peatlands, especially the prevention of land fires^{19,20}. Uncontrolled use of peatlands can lead to conflicts of interest between community groups. The land is an ecosystem that needs attention because there is growing biodiversity²¹⁻²³. Massive destruction and conversion of peatlands occur at an alarming rate in some regions, especially on tropical peatlands²⁴. Factors enhancing Indonesian peatlands' susceptibility to disturbance include peat doming that facilitates drainage, coastal location, high local population, road access, government policies permitting peatland use, lack of enforcement of protections and dry seasons that favor extensive burning²⁵. Implementing a wetland restoration strategy activity is an effort to manage peatlands. Farming activities must consider soil erosion, reforestation and reclamation activities on the ground. Policies must be able to encourage forest management, reforestation, nutritional management of agricultural land and wetland restoration²⁶. Cultivation of pre-eminent plantation commodities in coastal areas to accelerate the economy of rural communities is not separable from the utilization of land resources. Coastal areas in Riau Province consist of peatlands. In the dry season, peatlands often get dry and are very vulnerable to fire. On the other hand, fire risk is only prevented by keeping the peatlands wet or moist. Commodities to be developed should be adjusted to the type of peatland. Plantation crops cultivated by local communities in coastal areas include coconut, sago, rubber, coffee and cocoa. Yanti *et al.*²⁷, in an effort to maintain a balance on peatlands, it is very necessary to understand the values of local wisdom related to land management. The results of the study found that information flow and communication patterns of the community in conveying the values of local wisdom to management have started to disappear.

This study aimed to identify the potential for developing pre-eminent plantation commodities to improve community welfare in coastal areas by offering employment and business opportunities.

MATERIALS AND METHODS

Study area: This was an exploratory study about the development of commodity to accelerate rural economy in coastal areas, which aimed to examine the pattern and sequence of development or change to the formulation of policy strategies. The study was undertaken using the developmental research method in two districts located in the coastal areas of Riau Province, namely Kepulauan Meranti District and Indragiri Hilir District. The two study locations have different levels of productivity due to different grades of soil fertility. The survey was conducted to obtain primary information. The target respondents are people in coastal areas who carry out their activities in the plantation sector. The study was conducted from March-November in 2019.

Materials and tools: This method needs primary and secondary data. Primary data was collected using a list of questions that were prepared in accordance with the research needs. Primary data collection techniques using the Rapid Rural Appraisal (RRA) method^{28,29}, which is a participatory approach to obtain general data/information and assessment in the field in a relatively short time. In the RRA method, the information collected is limited to what is required to meet the objective of the study, but it is dug up more deeply by tracing its source to obtain complete information. To obtain this information, the team used a questionnaire and interview guidelines that had been prepared. The essence of the questions to the respondents is related to land ownership, land productivity, land suitability, superior commodities, the main source of family income and the development of plantation commodities in coastal areas. For multiplier effect analysis, information on household expenditures is needed, both for consumption and expenditure in the form of production support equipment for the plantation sector. To reduce the bias caused by subjectivity, everytime an interview with a respondent is completed, a preliminary data analysis should be made. If data errors were identified due to misinformation or misinterpretation, the data should be rechecked with the source of information or additional information is gathered to complete it.

Secondary data was obtained from relevant agencies as well as from leading plantation commodity entrepreneurs in the form of policies established by local governments and plantation companies. Other supporting data in the form of extensive development and production of plantation commodities have been carried out by coastal communities.

Statistical analysis: To get the potential results of developing commodity commodities in an effort to accelerate the rural economy in the coastal area, it is necessary to do some analysis, including analysis of the potential regions that can develop pre-eminent plantation commodities to increase farmers' competitiveness, analysis of predicted economic multiplier effect and potential to improve the welfare of rural communities and analysis of employment and business opportunities in the location of the study.

To identify the centers of pre-eminent commodity production and their potential for development, a Location Quotient analysis, known as LQ analysis was done³⁰, resulting in an interpretation formulated as follows:

$$LQ = \frac{S_i/N_i}{S/N} = \frac{S_i/S}{N_i/N}$$

Where:

- S_i = land size/production of commodity i in each district
- S = land size/ production of commodity in the district
- N_i = land size/production of commodity i in the province
- N = land size/production of commodity in the province

Decision making

- $LQ > 1$ = The region has the potential for producing a plantation commodity
- $LQ < 1$ = Compared to other regions, the region does not have the potential for producing a plantation commodity
- $LQ = 1$ = The region has the equal potential for producing a plantation commodity compared to other regions

Analysis of predicted multiplier effects of sago plantation activities was performed using the following formula³¹.

$$K = \frac{1}{1 - (MPC \times PSY)}$$

Where:

- K = Represents the multiplier effect
- MPC = Portion of farmers' income spent in the region
- PSY = Portion of farmers' expenditure who receives income in the region or percentage of the needs of palm oil plantation activities that can be met locally

The higher the number of multiplier effects for palm oil plantation activities (K), the higher the velocity of money in rural areas.

RESULTS

Development of pre-eminent plantation commodities based on agribusiness in coastal areas:

Plantation crops with considerable potential to be developed in Riau Province and high economic value consist of 10 commodities: palm oil, coconut, rubber, areca catechu, cocoa, gambier, coffee, sugar palm, pepper and sago. The top four commodities regarding the size of the land area where they grow and production quantity are palm oil, coconut, rubber and sago. Table 1 presents data on the growth of the land area and production of plantation commodities in Riau Province in 2011-2018.

Table 1 show that the overall land area and production of plantation commodities in Riau Province tend to increase. If each commodity is viewed, however, some commodities are increasing and others are decreasing. Plantation commodities that grow in terms of land area are palm oil, areca catechu, gambier, coffee and sago, while other commodities decrease significantly, namely rubber and coconut, mainly because the

land use is changed for palm oil plantation. In recent years, the price of rubber and coconut commodities were going down, which also made farmers switch their business to other commodities. The land area for coconut commodities was diminishing because of the intrusion of seawater that damaged coconut crops. This happened to some coastal areas, such as Indragiri Hilir District and Kepulauan Meranti District.

Plantation commodities that were increasing in production were palm oil, rubber, sugar palm and sago. An increase in palm oil production was due to its productive areas that were growing. Likewise, the productive area of sago plantation was increasing and it resulted in an increase in production. Meanwhile, rubber production was going up when rubber prices were relatively low. This is attributed to the fact that rubber farmers continue to do rubber tapping to meet the needs of their own households.

Analysis of the pre-eminent plantation sector in coastal areas:

The contribution of the plantation sub-sector to the regional economy in Riau Province is very significant, as indicated by the contribution of the agricultural sector to the Provincial GRDP of 2011, which rose from 23.46-25.3% in 2017.

Table 1: Growth of land area and production of plantation commodities in Riau province in 2011-2019

Commodity	Year									Growth (%)
	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Land area (Ha)										
1. Palm Oil	2,258,553	2,372,402	2,399,172	2,411,820	2,424,545	2,425,138	2,423,801	2,489,957	2,537,375	1.47
2. Coconut	521,038	521,792	520,260	516,895	515,168	511,074	510,925	422,595	421,002	-2.63
3. Rubber	504,139	500,851	505,264	502,906	501,788	496,878	487,952	484,071	494,106	-0.25
4. Areca Catechu	18,795	19,005	19,284	19,145	19,156	19,477	19,494	19,495	19,498	0.46
5. Cocoa	7,215	7,401	6,179	6,368	6,327	6,581	6,543	6,325	6,324	-1.63
6. Gambier	4,828	4,931	4,848	4,824	4,846	4,846	4,858	4,856	4,855	0.07
7. Coffee	4,725	4,862	5,415	5,713	4,640	4,517	4,511	4,769	5,068	0.88
8. Sugar Palm	29	35	29	22	23	23	17	18	21	-3.95
9. Pepper	12	13	7	6	5	5	1	2	2	-20.07
10. Sago	82,378	82,713	83,256	83,513	83,691	80,762	72,438	73,687	74,288	-1.28
Total	3,401,712	3,514,005	3,543,714	3,551,212	3,560,189	3,549,301	3,530,540	3,505,775	3,562,539	0.58
Production (Ton)										
1. Palm Oil	7,047,221	7,343,498	7,570,854	7,761,293	7,841,947	7,777,069	7,779,659	7,683,535	7,466,260	0.72
2. Coconut	481,087	473,221	427,080	421,654	421,465	411,623	415,927	392,702	417,172	-1.77
3. Rubber	333,069	350,476	354,257	367,261	374,901	376,704	355,613	373,749	373,726	1.45
4. Areca Catechu	10,700	10,817	8,762	8,597	9,825	9,798	10,053	10,050	10,062	-0.77
5. Cocoa	3,544	3,505	1,552	1,437	1,641	1,833	2,874	2,907	1,602	-9.45
6. Gambier	4,312	4,230	4,145	4,022	2,770	2,771	5,651	5,648	5,656	3.45
7. Coffee	1,913	2,520	2,603	2,465	2,843	2,823	2,782	3,030	3,019	5.87
8. Sugar Palm	11	19	22	22	22	19	19	23	25	10.81
9. Pepper	3	1	1	1	1	1	-	1	1	-12.83
10. Sago	284,319	281,704	126,145	340,196	366,032	361,146	326,750	373,636	376,857	3.58
Total	8,166,179	8,469,991	8,495,421	8,906,948	9,021,447	8,943,787	8,899,328	8,845,281	8,654,380	0.71

Source: BPS of Riau Province32

Table 2: LQ Analysis of pre-eminent plantation commodities in Riau province (including state-owned plantation company, large private plantation company and smallholding)

	No	District/City	Commodity					
			Palm Oil	Rubber	Coconut	Cocoa	Coffee	Sago
Non-Coastal Areas	1	Kampar	0.99	3.22	0.03	0.52	0.04	-
	2	Rokan Hulu	1.05	1.93	0.02	0.88	0.46	-
	3	Indragiri Hulu	0.95	4.01	0.03	4.09	0.81	-
	4	Kuantan Singingi	0.75	8.06	0.10	0.69	0.05	-
	5	Pekanbaru	0.98	3.25	0.07	-	-	-
Coastal Areas	6	Bengkalis	1.03	1.32	0.73	-	0.20	0.22
	7	Pelalawan	1.02	1.64	0.85	0.92	4.30	0.04
	8	Rokan Hilir	1.08	1.03	0.20	1.15	0.01	-
	9	Dumai	1.11	0.49	0.26	0.53	0.09	-
	10	Siak	1.11	0.41	0.04	0.14	0.31	0.20
	11	Indragiri Hilir	0.50	0.18	13.25	4.08	1.44	0.34
	12	Kepulauan Meranti	-	0.98	2.81	-	21.3	20.51

Source: Processed Data, base sector; base sector that has the potential to be developed

Likewise, the growth rate of the Gross Regional Domestic product (GRDP) of the agricultural sector in 2011 was 3.46% and in 2017 it increased to 5.28%. The global GRDP rate in 2011 was 5.57% and in 2017 it fell to 2.71%. Apparently, the agricultural sector, especially the plantation sub-sector has a substantial role in the regional economy.

Development of the agricultural sector, especially the plantation sub-sector, makes a contribution to community income, especially in rural areas. The plantation sub-sector grows both in terms of land area and production. In Riau Province, particularly, pre-eminent commodities that has substantial contributions to the GRDP and regional economy are palm oil, coconut, rubber, cocoa, coffee and sago.

Regarding the production, based on the Location Quotient (LQ) analysis of the six pre-eminent commodities in Riau Province, palm oil is almost evenly distributed in each district/city. Table 2 shows the results of the LQ analysis of pre-eminent commodities traded by the community. As for the production, palm oil smallholdings are a base sector in each district/city except in Kuantan Singingi District, Indragiri Hilir District and Kepulauan Meranti District. Kuantan Singingi District is a hilly area and located in the Bukit Barisan area, with the high level of land slope, making the rubber business a base sector with an LQ index of 8.06. It means that Kuantan Singingi District is very suitable for the rubber business. Likewise, state-owned plantation companies (PBN) and large private plantation companies (PBS) also make huge investment in rubber plantations in Kuantan Singingi Regency, because they are supported by natural factors.

The results of the LQ index analysis of the coastal areas presented in Table 2, show that dominant commodities that are cultivated are palm oil, coconut, cocoa, coffee and sago. Palm oil is cultivated in five districts: Bengkalis, Pelalawan,

Rokan Hilir, Dumai and Siak. Palm oil is the main source of community income, because it is supported by palm oil mills as the collector of Fresh Fruit Bunches (FFB) from farmers. This makes the price of FFB to be relatively stable compared to other plantation commodities.

Rubber business conducted by communities in coastal areas more prominent in three districts: Bengkalis, Pelalawan and Rokan Hilir. Rubber business is carried out in peatlands with a depth less than 1 m. Rubber plantations also function to maintain the balance of peatlands. Rubber business is still managed in a traditional manner without prioritizing maintenance of the plantation, so in those region rubber forests is still found.

Coconut commodity in coastal areas has been cultivated by farmers for generations. The price of this commodity, however, has not been able to give a significant contribution to farmers' income. The agribusiness concept that utilizes coconut-derived products will promote value-added to coconut commodities and provide more income to farmers. Coconut waste that has an economic value, such as coir, coconut shell and coconut water, has not been optimally utilized. In Indragiri Hilir District, coconut and cocoa are the base sector. Cocoa is planted with coconuts using the intercropping method.

Kepulauan Meranti District is not only the production center of coconut and coffee plants but also sago. Sago is one of the commodities that are widely developed by communities in coastal areas. Sago grows very well in coastal areas, especially in peatlands. Sago business is conducted by the community in a traditional way. Sago business managed by smallholdings and large private/national plantation companies is a base sector in Kepulauan Meranti District as indicated by the LQ index (20.51). Likewise, coffee commodity

is a base sector in coastal areas. Coffee species that has been developed in coastal areas is Meranti Liberika Coffee, which is cultivated in peatlands.

Economic Multiplier Effect and Farmer’s Welfare Index of Farmers in Coastal Zone:

Development of the plantation sub-sector in coastal areas has made an economic impact on rural communities as an increase in the community’s income is followed by greater purchasing power. Level of basic consumption, in particular, also goes up. Components of farmers’ consumption expenditure include nine basic necessities. Other expenses are costs of transportation, recreation and education. Transportation cost in coastal areas is relatively high because it is mostly served by water transport. The cost component of education is huge, due to farmers’ awareness to give their children higher education. Expenditure on education is an indicator of farmers' welfare.

All farmers’ needs, whether the need for basic necessity or maintenance of plantations can be generally fulfilled locally from, among others, sub-district markets, village markets, food stalls, farmer cooperatives, or mobile vendors. Production facilities in rural areas generally uses means of production obtained locally from home industry. Development of the plantation sub-sector in coastal areas leads to increased currency in circulation in rural areas. Results of calculation of the welfare index and Multiplier Effect (ME) for several plantation commodities in coastal areas are presented in Table 3.

The ME index of palm oil has been declining since 2014. It means that the economic acceleration in rural areas was slowing down despite the ME figure showing greater than one. In 2018, the ME index was 1.93, meaning that every \$1 investment will cause the amount of currency in circulation in that area to be \$1.93. This is because the government has a policy prohibiting the opening of new plantations. As the financial condition of palm oil farmers is relatively established, their consumption patterns follow the urban lifestyle, resulting in the demonstration effect.

The ME index of coconut, which is widely cultivated in Indragiri Hilir District, tends to fall since 2016. In 2018, the ME index was 1.42, which means that there was a relative decrease in the amount of currency in circulation in rural areas, reflecting that the passion for investment in coconut commodities has diminished. This condition was largely caused by the fluctuated price of coconut established by farmers. In order to increase the income of coconut farmers through the development of investment, support from both the regional and central government is needed. Investment should also be directed to the development of its derivative products.

As the economic condition of palm oil and coconut farmers improved, farmers in coastal areas who cultivate other commodities, such as sago, cocoa and coffee, also showed a better economic condition. Increased income led to greater purchasing power and an increase in the amount of currency in circulation in coastal areas. Basic consumption and household needs were mostly fulfilled by local market in rural areas. Transportation in coastal areas was dominated by water transport that relatively costs more money. Basic necessities and household needs were obtained from village and sub-district markets. Leakage of farmers’ income in coastal areas was relatively small.

Specific commodity cultivated in coastal areas, especially in wetlands, is sago. Looking at the cost structure of sago plantation business that is designed to be operated with manual techniques, the costs of direct labor and technical field staff take a sizeable portion. Therefore, the velocity of money, in the long run, is expected to stimulate economic growth in coastal areas as trade and service industry develops. This process means that sago business conducted in coastal area creates a multiplier effect, especially in employment and business opportunities. Economic acceleration caused by sago business tends to improve. In 2018 the multiplier effect index rose to 2.28 from 1.72 in 2016. It means that investment in sago commodities increased and the economic condition of sago farmers improved as their income and their purchasing power increased.

Table 3: Welfare index and economic multiplier effect in coastal areas

			Year			
			2012	2014	2016	2018
	Commodity	(Welfare index) →	0,43	0,27	0,31	0,16
Economic multiplier effect	Palm Oil		3,28	3,43	2,82	1,93
	Rubber		-	0,65	0,43	0,51
	Coconut		2,07	1,42		
	Cocoa		0,80	0,94	1,53	1,70
	Coffee		1,46	1,62		
	Sago		-	-	1,72	2,28

Source: Processed Data

DISCUSSION

Development of pre-eminent plantation commodities (KUP) in coastal areas aims to alleviate poverty and underdevelopment, especially in rural areas, as well as pay attention to equal distribution of income. Agricultural development based on pre-eminent plantation commodities in general aims to improve the community's welfare and thus create a change in the lifestyle of the surrounding community. On the other hand, the successful development of pre-eminent plantation commodities based on agribusiness is expected to reduce income inequality between community groups and between regions. In line with thought Raghunathan *et al.*⁸, the expansion of effective agriculture is the key to increasing productivity, increasing farmers' access to information and promoting a wider variety of crop sequences and better planting methods. Stakeholders, especially the local community are the determining factors for the success of plantation development. The success of their farming is very influential on their lifestyle¹². Participation in contract farming significantly increases labor productivity, price margins, agricultural output and contributes to net income¹⁵.

Economic policy at the sub-national level must adhere to a new paradigm where the empowerment of people's economy must become the main concern, because most people depend on the agricultural sector for their livelihood and this sector still contributes greatly to the country's economy. The empowerment of people's economy also means building a better agricultural economy. Industrial development should pay attention to backward linkage with the agricultural sector or primary sector, while forward linkage must consider the process to promote added value and improve good marketing so the products delivered are not useless. The result of Conteh thinking regional economic development policies over the past two decades illustrate some of the complexities of public, private and community partnerships in policy governance when a country seeks to maintain and magnify benefits in the global economy¹⁰.

The gap between human population growth and crop yields presents challenges for farm-household farmer production and income. The forward-looking approach must consider crop production at the farm-household scale supplementing macro-scale analysis of the dimensions of food security production^{32, 33}. Future development cannot ignore the rural development achieved through development in the agricultural sector that is based on agribusiness due to increase in population, which also increases the need for food, increase in community's income resulting in the increasing

need for quality and diverse food, thus requires agro-industry and Agribusiness development that will have an impact on the economic growth in a region due to increased farmers' income.

Field observation revealed that sago business conducted in coastal areas gave better income to actors of sago agribusiness. The welfare index of coastal communities during the period 2016-2018 increased by 16% because sago business contributed to family income in coastal areas. According to Hidayat *et al.*³⁴, in the future, sago commodities would play an important role in food security and biodiversity. Few researches³⁵⁻³⁷ agreed that products derived from sago and its waste also provided high economic value if utilized.

Sixty-four percent of areas in Riau Province are peatlands, which are very suitable to the development of sago and coconut commodities as the main source of income for communities in coastal areas. This is because sago requires wetlands, while coconut is very suitable to grow in peatlands with depth less than 1m. To maintain the balance of development in coastal areas, government intervention through the establishment of agricultural development policies is urgently needed. Kusnandar *et al.*³⁸, stated that sustainable agricultural development required the empowerment and involvement of all actors in agricultural production and supply chains to allow changes. In line with this idea, the sustainable development of sago and coconut commodities based on agribusiness is very appropriate to reduce the risk of fire and land damage.

CONCLUSION

The leading commodities in the coastal areas of Riau Province are coconut, sago, rubber and coffee. Coconut and sago have significant potential for increasing the income of agribusiness actors through the creation of their derivative products in coastal areas. Cultivation of sago is highly relevant for peat areas and wetlands in an effort to overcome fire disasters in coastal areas. There must be a policy from the government to promote value-added to pre-eminent commodities in coastal areas through the agribusiness system. It takes the role of stakeholders to encourage the empowerment of economic institutions and organizations of the coastal community as a forum for the development of sustainable plantation-based productive business.

SIGNIFICANCE STATEMENT

This study identifies commodities that are seeded in coastal areas. The commodity is a base sector and contributes

to the household income of coastal communities. The main problem faced by coastal farmers is the weak bargaining power of commodities. Farmers are always in the monopsony position. The results of the study, regarding efficiency and opportunities, leading commodities have the potential to increase the income of farmers in coastal areas. This research will help researchers to plan agricultural development projects in coastal areas. The output of this study is the recommendation for the development of the agricultural sector for coastal communities. This is expected to be a material consideration for policymakers in efforts to accelerate the economy of coastal communities both regionally and nationally.

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