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POTENTIAL AND DEVELOPMENT STRATEGY OF PALM OIL DOWNSTREAMING IN KUTAI KARTANEGARA DISTRICT: A CASE STUDY OF KEMBANG JANGGUT SUB-DISTRICT

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ABSTRACT

The potential availability of raw materials and downstream development strategies for processed palm oil products are important to study, therefore this study aims to find the potential of raw material commodities and analyze the downstream development strategy of processed palm oil products in Kembang Janggut District. The research study was analyzed descriptively. Data collection techniques were carried out using group discussion methods, questionnaires, and interviews. The data obtained were analyzed quantitatively to determine the potential availability of raw materials, then swot analysis to determine alternative strategies to be used for the development of downstream processed palm products. The results showed that of the 20 sub-districts in Kutai Kartanegara Regency, Kembang Janggut sub-district has the highest potential for oil palm production reaching 83.644 tons with the number of planters 2.052 households and an area of 7.138 ha with productivity reaching 13.370 kg/ha. The strategy for the development of processed palm oil from the SWOT analysis is in cell 1 positioning with aggressive strategy recommendations. This positioning shows that the downstream palm oil strategy policy is in a condition of having enormous strengths and opportunities. There are 5 (five) issues of palm processed development strategies, which are the priority scale of development, namely 1) utilization of institutions for continuity of production that can absorb labor; 2) optimizing labor absorption through increased use of raw materials; 3) optimizing the use of raw materials to increase production through partnerships; 4) optimizing the use of raw materials in order to increase added value; and 5) increasing the use of raw materials to take advantage of market availability.

KEY WORDS

Downstream, raw materials, palm oil products, development, strategy.

The oil palm plant originates from the African continent. Oil palm was introduced to Indonesia in 1848 by the Dutch government. At that time, oil palm plants were considered as one type of ornamental plant (Lubis and Agus in Aulia *et al.*, 2023). The downstream policy of palm oil products is a strategy to increase the added value of state-owned commodities (Ministry of Industry, 2021), strengthen the industrial structure (Syafriana *et al.*, 2019), increase domestic business opportunities and attract investment into the country (Ministry of Industry, 2021), generate foreign exchange from exports (Irawan and Nining, 2021; Agusalim, 2016) and create new jobs (Octaviani, 2002).

Sari (2010) states that Indonesia has a comparative advantage in all palm oil products, as Indonesia controls world palm oil production. However, according to Nova (2010), Indonesia is currently lagging behind in terms of CPO derivative product development because until now the Indonesian palm oil industry still exports more pure CPO compared to producing and exporting CPO downstream products.

Through downstreaming, it is expected that agribusiness actors and plantation owners will get added value (Endang Sastraatmadja, 2023) and a wide market guarantee, which in turn can have a positive impact on income and economic improvement in the community (Krisnamurthi and Rizal, 2023; Susila *et al.*, 2007). With downstreaming, commodities are exported not in the form of raw materials, but in the form of semi-finished or finished goods. The plantation sector that is cultivated by smallholders requires concrete added value to the products it produces. The definition of added value is a commodity that increases in value



due to processing, transportation or storage in a production (Endang Sastraatmadja. 2023; LPPM Tanjungpura University, 2020). Indonesia is one of the largest palm oil producers in the world. Palm oil is a mainstay commodity that contributes greatly to the national economy. However, most of the palm oil production is still exported in raw form (CPO) and palm kernel (PKO), so the added value is still low (Mutawallie, 2023).

Kutai Kartanegara Regency has very potential plantation resources and most of its people have the main livelihood as planters. The agricultural products of the planters are still mostly sold in the form of raw materials, in other words, they have not been optimized into semi-finished products or finished materials in the form of agroindustry products. Oil palm is the highest oil-producing crop per hectare, to be able to produce it economically requires high skills, neat management and a disciplined and trained workforce. The activity is not only profitable for the regional economy, but also provides employment for thousands of families who still depend on plantation products.

In addition to producing CPO, which is a priority, palm oil products can also be processed into derivative products with high added value. This is in accordance with the opinion of Mariati (2007) who states that derivative products from oil palm have high competitiveness in the market, including cooking oil, butter, cakes/biscuits, textile industry materials, pharmaceuticals, cosmetics, soap, detergents and other derivative products such as the use of biofuels and CPO, including empty baskets which are processed into compost. In Kembang Janggut sub-district, oil palm plantations are managed by large private plantations, plasma and smallholder plantations. The large number of planters who manage oil palm plantations is expected to emerge people's businesses, cooperatives or BUMDes that will manage palm derivatives. The development of palm oil derivative products in Kembang Janggut District requires a development strategy policy. For this reason, the government and stakeholders encourage the downstream development of the palm oil industry in various processed palm oil. In this study, two problems were formulated, namely 1) how much is the potential of palm oil commodity raw materials to support the downstreaming of processed palm oil products; and b) what is the strategy for developing downstream processed palm oil with the aim of finding the potential of raw material commodities and analyzing the development strategy of downstream processed palm oil products in Kembang Janggut District, Kutai Kartanegara Regency.

METHODS OF RESEARCH

This research was analyzed with descriptive quantitative and qualitative. The research was conducted from August to December 2023. The research location was in Kembang Janggut. There are 2 (two) data sources in this research, namely primary data and secondary data. Primary data was obtained from interviews, focus group discussions, questionnaires and field observations. While secondary data is obtained from research reports or research results relevant to this research sourced from regional apparatus and various sources of previous research.

Data collection techniques were conducted using group discussions, questionnaires, and interviews. The respondents who became key informants in discussions and filling out questionnaires were business actors, raw material producers (smallholders), sub-district governments, village governments and the Plantation Technical Implementation Unit. The data obtained were analyzed quantitatively to determine the potential availability of raw materials, then SWOT analysis was used to determine the strategy for developing downstream processed palm oil products. Strategy formulation using SWOT analysis begins with systematically identifying internal and external factors. The logic used is to maximize strengths and opportunities. On the other hand, it simultaneously minimizes weaknesses and threats. The processed palm oil business will have a performance determined by a combination of internal factors or Internal Strategic Factor Analysis Summary (IFAS) and external factors or External Strategic Analysis Summary (EFAS).



RESULTS AND DISCUSSION

Oil palm is one of the leading plantation commodities in Kutai Kartanegara which is cultivated by 13,647 family heads as owner farmers. The area of smallholder oil palm plantations in Kutai Kartanegara reached 30,101.6 hectares with productivity of 12,946.6915 Kg/ha and production of 283,472.989 tons as presented in Figure 1.

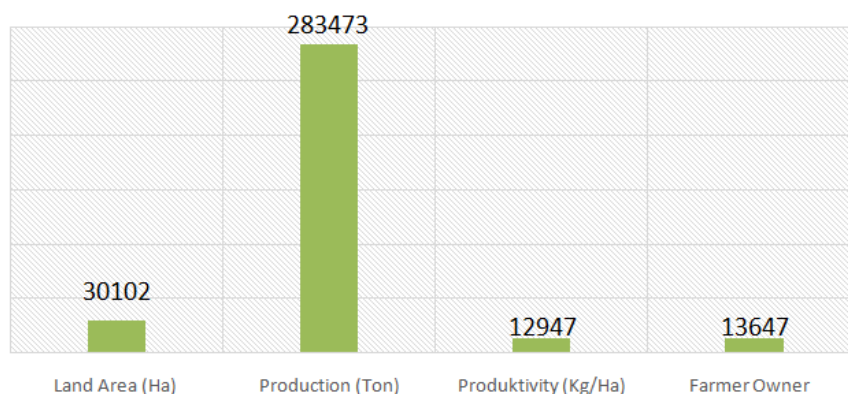


Figure 1 – Area, Production and Productivity and Farmer Owners in 2022

There are 3 (three) sub-districts in Kutai Kartanegara Regency where many people are engaged in oil palm plantations, namely Loa Kulu, Muara Kaman, and Kembang Janggut. Of the three sub-districts, Kembang Janggut has the highest oil palm potential with a production of 83,644.81 tons and the number of smallholders 2,052 family heads with an area of 7,138 ha and productivity of 13,370.33 Kg/ha as presented in Figure 2.

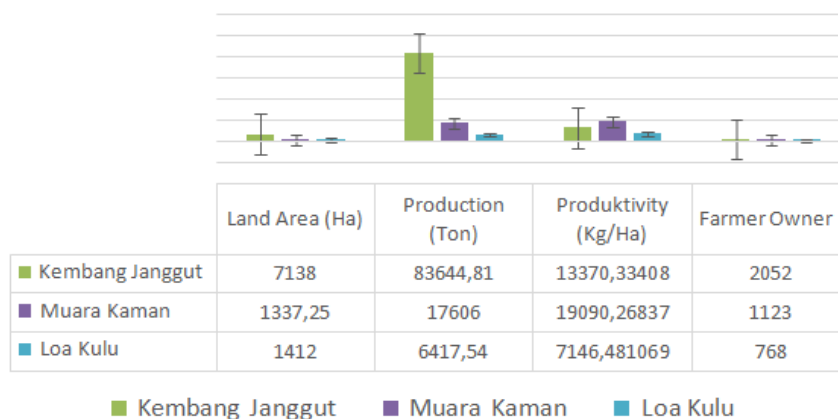


Figure 2 – Oil Palm Area, Production, Productivity and Smallholders in three Districts in 2022

Palm oil is one of the leading plantation commodities in Kutai Kartanegara. Palm oil can be processed into various derivative products, such as cooking oil, butter, cakes/biscuits, textile industry materials, pharmaceuticals, cosmetics, soap, detergents and other derivative products such as the use of biofuels and CPO, including empty baskets which are processed into compost (Mariati, 2007). Kembang Janggut sub-district has the highest potential for this palm oil commodity with a production of 83,644.81 tons with the number of smallholders 2,052 families and an area of 7,138 ha with a productivity of 13,370.33 Kg/ha. The availability of raw materials for Fresh Fruit Bunches as well as empty fruit bunches, shells and even palm plant organs such as palm tree trunks is very abundant so that it has the potential to be processed into various downstream products made from palm commodity raw materials. This is in line with the opinion of Krisnamurthi and Rizal (2023) which states that downstream is part of a systemic effort to manage raw materials in accordance with their renewable nature and requires the development of the upstream sector in order to supply suitable raw



materials, both certainty of production, quality, type of product, price, and so on. Simultaneously, it is also necessary to develop the marketing of these downstream products so that they can be accepted by the community.

According to Win (2017), the role of smallholders in supporting the sustainability of downstream palm oil through the provision of raw materials that meet quality standards is very important to produce processed palm oil that meets the standardization for the needs of the downstream industry. Hidayat et al. (2012) suggested that smallholder oil palm productivity is low and there is a gap in profits per hectare when compared to privately owned plantations. Furthermore, Alwarrizti et al. (2015), the gap experienced by oil palm smallholders due to lack of access to services and adequate planning when compared to partner farmers (plasma) of the Company. This condition if left unchecked will become a gap in the concept of competitiveness and sustainability of the fulfillment of the supply of palm oil raw materials from smallholder plantations so that it can have an impact on the downstream palm oil industry.

Based on the strength elements in the IFAS component of the Kembang Janggut sub-district palm oil downstreaming strategy, the business permit (institutional) is the highest score while the lowest score is the business location. In the weakness element, the highest score is on the limited capital factor and the lowest score is on conventional promotion. In the EFAS component based on the opportunity element, the highest score is on labor absorption and the lowest score is market availability. The highest score on the threat element is weather or climate changes related to the production of raw materials in the production process and the lowest score on accessibility (production location with consumers).

After knowing the dominant components for each element (strengths, weaknesses, opportunities and threats), it will be easier to make decisions which are downstream palm oil strategy policies for Kembang Janggut Sub-district as the score values are presented in Table 1.

Table 1 – Score value of palm oil downstream strategy

N	Description of SWOT Factor	Weight	Rating	Score
Strength				
A	S1: Availability of Raw Materials	0,09	4,50	0,40
	S2: Availability of Labor / Human Resources (Skills)	0,07	5,50	0,37
	S3: Availability of Equipment	0,13	4,75	0,63
	S4: Business Location	0,02	5,50	0,12
	S5: Business License (Institutional)	0,16	6,00	0,93
Total Strength		0,47		2,46
Weaknesses				
B	W1: Limited Capital	0,20	4,00	0,80
	W2: Mastery of the Production Process (Product Quality Product Quality is Still Low)	0,11	4,25	0,47
	W3: Business Management Skill	0,11	4,50	0,50
	W4: Production Continuity	0,07	4,25	0,28
	W5: Still Conventional Promotion	0,04	4,25	0,19
Total Weaknesses		0,53		2,24
Total Score Strengths - Weaknesses				0,21
Opportunities				
C	O1: Increase the Added Value of Agricultural Commodities	0,12	6,00	0,70
	O2: Open Partnership Opportunities	0,12	6,00	0,70
	O3: Labor Absorption	0,14	6,50	0,91
	O4: Improving Living Standards	0,14	6,00	0,84
	O5: Market Availability	0,05	6,00	0,28
Total Opportunities		0,56		3,42
Threats				
D	T1: Weather/Climate Changes Relating to Raw Material Production and Production Processes	0,19	4,00	0,74
	T2: T2: Similar Products from Other Districts/Cities	0,05	4,50	0,21
	T3: Accessibility (Production Location with Consumers)	0,02	4,50	0,10
	T4: Land Support (Pollution/Conversion Land Function)	0,14	3,75	0,52
	T5: Policy Change	0,05	4,50	0,21
Total Threats		0,44		1,79
Total Score of Opportunities - Threats				1,63

Source: Primary data processed by researchers, 2023.



development strategy (S-O). Strategies that utilize strengths and reduce challenges in order to develop independent and sustainable processed palm oil (S-T). Strategies to minimize weaknesses and take advantage of opportunities that can increase productivity in order to win global competition (W-O). The strategy of minimizing weaknesses and utilizing challenges into advantages in order to increase competitiveness, as well as increasing public interest in developing processed palm oil (W-T).

Table 2 – Design of Palm Oil Downstreaming Strategy through SWOT Matrix

Internal Factors (IFAS)	STRENGTHS (S)	WEAKNESSES (W)
	S1: Raw Material Availability. S2: Labor Availability (Skill). S3: Equipment Availability. S4: Business Location. S5: Business License (Institutional).	W1: Limited Capital. W2: Mastery of Production Process (Low Product Quality). W3: Business Management Skills. W4: Production Continuity. W5: Promotion that is still conventional.
External Factors (EFAS)		
OPPORTUNITIES (O) O1: Increase Value Added. O2: Open Partnership Opportunities. O3: Labor Absorption. O4: Improving Living Standards. O5: Market Availability.	Strategy S O Utilize institutions for continuity of production that can absorb labor. Optimizing labor absorption through increased use of raw materials. Optimizing the use of raw materials to increase production through partnerships. Optimizing the use of raw materials in order to increase added value. Increase the use of raw materials to take advantage of market availability.	Strategy W-O Increase the use of capital from through cooperative partnerships. Increase capital from various sources capable of increasing production to capture market share. Increase partnerships in order to improve product quality. Increase production continuity through labor absorption. Increase promotion through digitalization in seizing market opportunities.
TREATHS (T) T1: Weather/Climate Changes Relating to Raw Material Production and Production Processes. T2: Similar Products from Other Regencies or Cities. T3: Accessibility (Production Location to Consumers). T4: Land Supportability (Land Pollution/Conversion). T5: Policy Change	Strategy S-T Anticipate weather changes through technology-based equipment Anticipating similar products through optimization of raw material utilization. Improving raw material utilization through production process improvement Increase production by utilizing raw materials in anticipation of similar products. Anticipate weather changes through equipment upgrades. Prepare business licenses in anticipation of policy changes	Strategy W-T Increase capital in order to compete with similar products. Improve product quality in order to overcome similar product competition. Increase capital for the continuity of the production process. Improving business management in the face of similar product competition. Increase promotion to increase competitiveness with similar products.

Source: Primary data processed by researchers, 2023.

Based on the 20 strategic issues of palm oil development, 5 (five) selected strategies were determined based on the results of the SWOT analysis above as a priority scale for palm oil development. The strategic issues are as follows:

- Utilize institutions for continuity of production that can absorb labor;
- Optimizing labor absorption through increased use of raw materials;
- Optimizing the use of raw materials to increase production through partnerships;
- Optimizing the use of raw materials in order to increase added value;
- Increase the use of raw materials to take advantage of market availability.

CONCLUSION

Kembang Janggut Sub-district has the highest oil palm production potential in Kutai Kartanegara Regency with the number of planters 2,052 family heads, an area of 7,138 ha with productivity reaching 13,370 kg/ha, and production of 83,644 tons.

The strategy for the development of processed palm oil from the results of the swot analysis is in cell 1 positioning with the recommendation of an aggressive strategy with the policy of downstream processed palm oil strategy in a condition of having enormous strengths and opportunities.



There are 5 (five) issues of processed palm oil development strategies, which are the priority scale for the development of processed palm oil, namely 1) utilization of institutions for continuity of production that can absorb labor; 2) optimizing labor absorption through increased use of raw materials; 3) optimizing the use of raw materials to increase production through partnerships; 4) optimizing the use of raw materials in order to increase added value; and 5) increasing the use of raw materials to take advantage of market availability.

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