

# MANAGEMENT STRATEGY OF WAREHOUSE RECEIPT SYSTEM ON COCONUT COMMODITIES

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**Abstract:** Warehouse Receipt System is one of the most powerful tools to overcome price fluctuations in the agricultural/plantation sector, especially during the harvest season. Therefore, this study aims to analyze the existing conditions of coconut commodities in Inhil District and to formulate appropriate strategies for the application of WRS to the coconut commodities. Data were collected by observation, interview, and document review. Data were analyzed using interactive Miles, et al. (2014). Through Collection data, condensation data and finally withdrawing conclusions, then to create a strategy using SWOT analysis by compiling IFAS and EFAS tables. The study showed that the production of coconut commodities decreased dramatically, in which low coconut prices and fluctuation of the coconut prices were the main factors. While the result of suitable strategy is the diversification of strategy with the policy direction must be the master plan of WRS, acceleration of regional infrastructure development, strengthening of socialization of WRS, innovation of plantation water trio program through technology utilization and increasing industry in coconut processing sector.

**Keywords:** Coconut Commodity, WRS, SWOT Analysis.



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Warehouse Receipt System (WRS) has excellent benefits for farmers and economic actors. That actor is Banking, business, and government. That actor contributes to maintaining the stability and control of commodity prices, Guarantees production capitals through financial institution support are flexible in channeling creditsto banks with minimal risks, ensuresgoods availability, ensures national commodity stocks, plays a role in moni-

toring commodity trading, ensures the availability of industrial raw materials, particularly agro-industries, is capable of efficiency in logistics and distribution, be able to provide fiscal contribution to the government, and encourages the growth of warehousing industry and other WRS-related business fields (Sadaristuwati, 2008 in Ashari, 2011).

The existence of WRS in Indonesia is an adopted concept from countries that have successfully implemented the system. Literature review data shows that developing countries successfully performing WRS include: India, Malaysia, Philippines, Mali, Turkey, Poland, Mexico, Uganda, Romania, Hungary, South Africa, Zambia, Ghana, Russia, Slovakia, Bulgaria, Cestia, and Kazaksta. This is because WRS can increase income and bargaining

position of farmers, motivate farmers to produce higher and maintain good quality products, open access to financial institutions, open knowledge, and skills of farmers in relation to information technology, and reduce government intervention in regulating agricultural commodity trade (Onumah, 2002, IFAD, 2012, Tosun, et al., 2014, Chapoto and Aboagye, 2015, and Suryani, et al., 2014).

Law of the Republic of Indonesia Number 9 the Year 2011 on Amendment to Law Number 9 the Year 2006 regarding Warehouse Receipt System became the basis of WRS implementation in Indonesia. The policy is one of the solutions offered by the Government to overcome classical problems of agriculture/ plantation sector such as difficulty in obtaining financing assistance because of being stuck with collateral that becomes a prerequisite in financing, and falling prices on agricultural commodities, especially during great harvest season. Those have become potential problems that are very detrimental to farmers. The phenomenon often makes farmers do not harvest their crops because the cost of harvest is higher than the selling price (Muhi, 2011).

Similar conditions are always faced by coconut farmers (*Cocosnucifera*) in Indragiri Hilir District (Inhil) as the largest coconut producing district on a national and international scale. This is due to (1) oligopsony coconut market that causes the price of coconut cheap, even more at farmer's level; (2) price fluctuations, especially during great harvest, so as farmers let the farm not harvested; (3) causing damage to about 100,000 hectares of plantation. To overcome these issues, WRS becomes one of solutive policy towards the fluctuating coconut market. The Inhil District Government proposed to the Minister of Trade of the Republic of Indonesia for the commodity of coconut (copra) to enter warehouse receipt. This was responded by the enactment of Regulation of the Minister of Trade of the Republic of Indonesia No. 35 / M-DAG / 5/2016 on Goods That Can Be Stored in Warehouse in Operation Warehouse Receipt System. The commodity of coconut (copra) then entered the Warehouse Receipt (RG). This was followed up with the draft of the Inhil District Regulation on WRS implementation.

The implementation of WRS for coconut commodities will be conducted in Indonesia for the first time, so as an appropriate strategic management plan is required so that the implementation objectives are well achieved. Having a good strategy may create a competitive advantage and whether the business should exist or not can be decided (Learned, et al., 1965 in Rangkuti, 2008, and Gitosudarmo, 2012).

Putri, et al. (2017), with research on Rice Farming Income Applying WRS in Tanggamus District reported that income of rice farmers applying WRS is higher than non WRS farmers, and the main factor for the in optimal implementation is the lack of government support and socialization of WRS benefit for farmers. These results are similar to the review of the Study of Improvement Warehouse Receipt System Utilization (2017) conducted on grain commodities in West Java and cocoa commodities in South Konawe, Southeast Sulawesi. It is indicated that if the simulation goes well, farmers are expected to earn a profit of 5%, and warehouse managers can get optimal profit up to 75%. To improve the welfare of farmers, the profit sharing scheme can be proposed between warehouse managers (cooperatives) and farmers. The WRS scheme on cocoa commodities shows that if the simulation scheme runs well, farmers are expected to earn a profit of 68%, while the profit received by the warehouse manager is 32%. If this scheme works, WRS main objective to improve farmer's welfare can be achieved.

The study by Ministry of Trade of the Republic of Indonesia on the Implementation Analysis of the Warehouse Receipt System on Pepper Commodity (2014), found four critical factors for the implementation of WRS pepper commodity. That is the commitment of head of local government, integration of institutions in one place, education and socialization, increasing production, and quality as well as the presence of off takers/buyers/auction markets. Similarly, according to results of a study conducted by Ashari (2011), WRS runs well, but strong commitment from the Government and related stakeholders is needed, so they can provide adequate facilities and warehousing infrastructures and cre-

ate a network of market information and bank interest subsidy.

The previous research becomes the basis of reference, urgency, and difference in this study compared to previous research. Because the first WRS-related study on coconut commodity in Indonesia will be conducted in Inhil District, this study aims to describe in details the condition of coconut plantations in Inhil District followed by formulating appropriate strategies for application of the WRS concept.

## METHOD

This research employed a qualitative descriptive approach using 2 (two) methods of analysis. Firstly, interactive analysis Miles, et al. (2014), was used to answer the first aim of the study. As an initial step, condensation of data by direct observation into the field and interviews with Inhil District Regency, Chairman of Commission II in charge of trade and agriculture/plantation, Head of Industry and Trade, Plantation Department, Regional Development Planning Board, employers, and coconut farmers were conducted. Whereas, the documentation study was carried out by collecting secondary data through sortation according to the research needs. Furthermore, condensation results were structured according to coding, so that conclusions can be drawn from the research findings.

Meanwhile, SWOT analysis was used to make a formulation of WRS implementation planning strategy on coconut commodities (copra) in Inhil District. The first stage was a classification of internal factors, called Internal Factor Analysis Summary (IFAS) consisting of (Strengths & Weakness), while the second stage was a classification of external factors, called External Factor Analysis Summary (EFAS) consisting of (Opportunities & Threats). The IFAS and EFAS components were identified according to their classification, then weighted by expert judgment and rated by related stakeholders. As a result, it produces an IFAS score (Total Difference Strength - Total Weakness =  $S - W = X$ ) and EFAS score or (Total Opportunity Difference - Total Threat =  $O - T = Y$ ) as explained (Rangkuti, 2008 and Robinson and Pearce, 2007).

The results of  $x$  and  $y$  are aimed to see the position of the organization which is described in the form of a kite diagram. Thereafter, crossings between IFAS and EFAS were conducted with the aim of producing the right strategy for planning WRS implementation on coconut commodities (copra) in Inhil District.

## RESULTS AND DISCUSSION

### Existing coconut commodities

Results of research indicate that coconut plantations in Inhil District reach 429.694 hectares in width, with varieties of deep coconut and hybrid coconut. However, there was damage occurring in up to 100,254 hectares, dominated by deep coconut plantations. It is because of the destruction of the three water system (due to an intrusion of sea water, siltation of plantation ditches/ canals, and destruction of the valve door), old coconut plantations, and pests infected plantations. The main problems are low prices and price fluctuations occurring, in particular during harvest season, so that people let the farm unmanaged because of unbalanced costs between works and yields (loss).

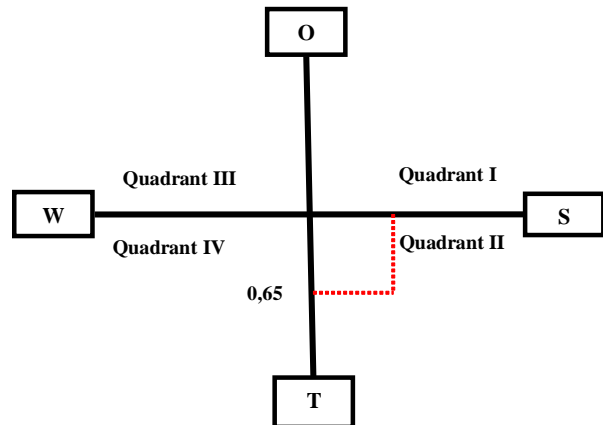
Muhi (2011), study on the production of seasonal agricultural / plantation sector and a phenomenon of falling prices on agricultural commodities (particularly during harvest time) have become potential problems that are very detrimental to farmers. Even some farmers are often reluctant to harvest their crops because prices of agricultural products are always low during the harvest and the harvesting cost is higher than the selling price of products. This is due to oligopsony coconut market in Inhil District, long trading chain, the absence of price standardization policy.

Various programs are being and will be implemented to overcome issues of coconut plantation, such as a three-water-system program, promotion of coconut commodity potentials in seeking for investors, plans for the establishment of Regional Owned Enterprise (BUMD) and WRS. WRS has been planned since 2011 but yet to establish. It is because of low commitment and consistency of Inhil District Government in the implementation of policies/programs. In addition, concerning the WRS,

Inhil District Government does not have a proper planning strategy to implement the program as expected.

**Results SWOT Analysis**

SWOT analysis consists of internal factors of strength and weakness as well as external factors of opportunity and threat for WRS implementation on coconut commodity (copra) in Inhil District. SWOT identification and clustering have been done in the planning of WRS application on coconut commodity in Inhil District. Then those were weighted and rated according to the analytical technique (refer to an analytical method). Finally, the position of quadrants can be described (Figure 1) based on the analysis.



**Figure 1 Kite Diagram of Implementation Design of WRS on Coconut Commodity**

	<b>STRENGTHS (S)</b>	<b>WEAKNESSES (W)</b>
<b>IFAS</b>	<ul style="list-style-type: none"> <li>Regional regulation (Perda) discussed and agreed by Regional Government (Pemda) and Regional Representative Council (DPRD);</li> <li>Air transportation (airports) available;</li> <li>Ports available;</li> <li>Strategic location for its close distance to Malaysia and Singapore;</li> <li>Stock available and the presence of guarantee for product quality;</li> <li>Inhil District as the larger producer of coconut in Indonesia and the world;</li> <li>Ownership of coconut plantations dominated by a community;</li> <li>The coconut was serving as a tree-of-life commodity.</li> </ul>	<ul style="list-style-type: none"> <li>The lower commitment of Regional Government;</li> <li>The initial investment for WRS implementation unavailable;</li> <li>Insufficient number of warehouses; Inadequate standardization and facility of warehouses;</li> <li>Unprofessional and unavailability/ inadequate human resources for the management;</li> <li>Inadequate road infrastructures;</li> <li>Remote access to sub-districts/ villages;</li> <li>The unfinalized concept of WRS implementation scheme (cooperative or KUB system).</li> </ul>
<b>EFAS</b>		
<b>OPPORTUNITIES (O)</b>	<b>STRATEGISO</b>	<b>STRATEGIWO</b>
<ul style="list-style-type: none"> <li>Opportunity to enter into commodity exchange and stock exchange;</li> <li>Opportunity to export to different countries;</li> <li>Reducing fluctuation of coconut prices;</li> <li>Opportunity for investment increasingly open and clusters for coconut warehousing created, as well as</li> </ul>	<ul style="list-style-type: none"> <li>Immediately realizing WRS by utilizing the availability of large coconut production;</li> <li>Increasing coconut prices through keeping good processing quality of coconut raw materials (copra) through utilization of technology as to be able to maximize the potentials of the export market;</li> <li>Attracting investors to establish financial institutions providing soft</li> </ul>	<ul style="list-style-type: none"> <li>Encouraging Regional Government's commitment, preparing for human resources, creating synergism of regional development to promote the realization of WRS;</li> <li>Setting up clusterization of warehousing in different sub-districts.</li> </ul>

a distribution of coconut commodity controlled. loans through creatively promoting potentials of coconut.

TREATS(T)	STRATEGIST	STRATEGI WT
<ul style="list-style-type: none"> <li>• Competition with local companies and illegal buyers;</li> <li>• Community's habit of selling whole coconut kernels and making loans to middlemen;</li> <li>• Damage of coconut plantations and over-function of land;</li> <li>• Changes in regulation.</li> </ul>	<ul style="list-style-type: none"> <li>• Maximizing DPRD's support to immediately run WRS favored by a system of cooperative establishment in every village and reinforcing socialization to the community regarding WRS benefits so as being able to compete with local companies and illegal buyers;</li> <li>• Increasing coconut production through a program of three-water-management (<i>Trio Tata Air</i>) system;</li> <li>• Improving coconut export through keeping good quantity and quality of raw material production through utilization of technology.</li> </ul>	<ul style="list-style-type: none"> <li>• Attempting to encourage government's commitment, improving human resources and infrastructures for immediate implementation of WRS to prevent market competitiveness from happening;</li> <li>• Improving efficiency and effectiveness of regional potentials promotion in seeking for investors;</li> <li>• Improving consistency in designing the three-water-management program to overcome the damage to the community's coconut plantations.</li> </ul>

**Figure 2 SWOT Matrix of WRS Implementation Strategies of Coconut (Copra) in Inhil District**

Based on the kite diagram, the position of WRS implementation design on coconut commodity occupies quadrant II, indicating that Inhil District Government is strong but faces big challenges. Therefore the strategy that fits is diversification strategy, meaning the condition is steady but faced with many challenges so that the organization will be estimated to have difficulties to continue if it only relies on the previous strategy. Accordingly, the organization is advised to immediately multiply the variety of tactical strategies (Rangkuti, 2008 and Robinson and Pearce, 2007). After viewing the results of the diagram, a crossover between IFAS internal factors and EFAS external factors is used to produce good strategies (Figure Matrix 2).

The position of Inhil District Government organization which is the driving force for the realization of WRS occupies the ST strategy, shown in the previous kite diagram, and it produces strategies shown in Figure 2. Based on a crossing of IFAS and EFAS, targets for application of WRS on coconut commodity are applicable because good planning is those realistic and workable. Therefore, 2 (two) goals are set (1) to increase prices and control fluctuation of coconut prices and to create competitiveness of

coconut market (2) to increase production, quality, and investment in coconut processing sector with the ultimate goal of improved coconut farmers' welfare in Inhil District.

Following these two targets, further strategies were set up to facilitate communication and participation, and accommodate different interests and values and assist decision-making in an orderly fashion and successful implementation (Bryson, 2007). Therefore, appropriate strategies for achievement of coconut farmers' welfare in Inhil District are (1) application of copra Warehouse Receipt System (WRS) with export market base (2) strengthening of three water system program and promotion and utilization of technology.

Policies made should be based on the strategies, since each policy direction is formulated to support the strategy (Regulation of the Minister of Home Affairs Number 86 of 2017). Thus, the policy directions in planning the implementation of WRS on coconut commodities are: (1) creating a master plan of WRS so as construction of supporting infrastructures and preparation of human resources management through competency training can be allocated; (2) accelerating development of basic in-

frastructures supporting the economy through partnership; (3) strengthening socialization to farmers about the benefits of WRS; (4) innovation of the three water system program to save coconut plantations; (5) maintaining product quality through provision of coconut processing plantations technology; and (6) improving industries in coconut processing sector through promotion of innovation and ease of investment service.

## CONCLUSION

The analysis results show that production of coconut commodity sector in Inhil District underwent a decrease, caused by massive damage of coconut plantations, due to low coconut prices and fluctuation of coconut prices. In addition, commitment and consistency of implementation of local government policies/ program plannings are considered low. Meanwhile, SWOT analysis for WRS plannings of coconut commodity by arranging IFAS and EFAS tables showed that ST strategy becomes the current organization position. Thus, a suitable strategy is diversification strategy that should be directed to (1) set the master plan of WRS (2) accelerate development of basic infrastructures supporting the economy; (3) strengthen socialization of WRS; (4) implement the innovation of three water system program; (5) utilization of plantations technology to support WRS; and (6) increase the number of industries in coconut processing sector.

## SUGGESTION

Based on the discussion and conclusion of the research, there are several suggestions for the sustainability of coconut agribusiness in Inhil District:

1. Applying for the WRS program as a short-term solution for coconut commodity, therefore Local Government should have a high commitment to this policy embodied in concept planning, budgeting, and implementing.
2. Building good communication and collaboration with private parties (warehouse owner) to accelerate the implementation of the WRS program.

3. Providing human resources training to manage WRS program and reinforce socialization regarding benefits of WRS program on coconut commodity.

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