MODEL OF LEADING FOOD CROP COMMODITIES DEVELOPMENT IN WEST ACEH DISTRICT

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ABSTRACT
Economic development the agriculture sector, especially superior food crops have a unique strategy in maintaining food crop production. Prime food crop in this area focused on agriculture development in supporting community livelihood. This research was conducted in the West Aceh district using a survey method, and this studies was prioritized on a food crop commodity basis involving farmers, agricultural extension workers and agents. The research was conducted in West Aceh district with survey methods. Studies related to oil as a commodity base involving farmers, extension agents and agency staff. Model analysis of the hierarchy, LQ, investment criteria, specialization and diversification. Study found that the development of prime commodities in West Aceh district has not been consistent with the potential of production centers in each sub-district. Several factors contributed to this inconsistency, among others. Elected as a prime commodity in West Aceh regency are paddy, zeamays, peanuts, cassava, soybean and sweet potato has been a prime of the community as a source of livelihood of the prime commodities sector. The best a strategy of commodity development in West Aceh is diversification strategy on the basis of the potential combinations, the type of commodity and infrastructure to support agribusiness. Each district as well as developed some commodity to anticipate the price fluctuations of commodity.

Key Word: agriculture subsector, prime commodities, commodity agibusiness

INTRODUCTION

The role of the agricultural sector is still very dominant in West Aceh. An indicator of this dominance can be seen from the large agricultural sector contribution to GDP Aceh. In the years 2015 until 2020 the Agricultural Sector produced relatively large amounts of GDP for Aceh compared to other sectors. This is one indication that over the last ten years the role of the agricultural sector in the Aceh province is still very dominant. After experiencing a slump during the conflict, agriculture in this area began to rise and make a positive contribution to the Gross Regional Product of West Aceh.

In West Aceh district as one of smallholder production centers also rely on GDP from the agricultural sector. From 2015 to 2020 shows, that GDP of the agricultural sector increased significantly. The increase is in line with the increase in GDP West Aceh district as a whole. When we compare the contribution of agriculture to the other sectors, it is clear that there is dominance of agriculture in GDP of West Aceh district. Compared to the total GDP of West Aceh district, the development of the agricultural

sector was fluctuated. In 2015, the agricultural sector contributed nearly 35%, and in 2011 increased to 38%, but by 2020 had declined to 20%. Despite, trend GDP from the agricultural sector still positive.

The prime commodities subsector with locations in West Aceh district. Prime commodities in this area has good prospects in the future, as a source of economic growth and job creation. Existing conditions related to the increasing of prime commodities production can be done by determining commodity. In general, there are 27 commodities that have been developed by the community in West Aceh district. Among the seven prime commodities that have evolved in this area, some of them can be categorized as part of national commodity and commodity areas. The Aceh Province commodity same with the West Aceh District in the commodity development for superior crop farming among them paddy, zeamays, peanuts, cassava, soybean, mung bean, and sweet potato. Commodity areas such as: paddy, zeamays, peanuts, cassava, soybean, mung bean, sweet potato, chili, cayenne paper, eggplant, banana, durio, guava, papaya, guava, watermelon,

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mangosteen, jackfruit, water apple. Zeamays, peanut, and cassava, although it is acreage, the production and the value of its production is relatively small, West Aceh have made paddy, paddy field and zeamays as the main production which can be developmet in area.

This shows that indicates, conditions in the central production area of prime commodities contrast to the plant area of existing conditions, production and its productivity. Paddy field crop grown in the district of Johan Pahlawan, Samatiga, Bubon, Arongan lambalek, Woyla, Woyla Barat, Woyla Timur, Kaway XVI, Mereubo, Pante Ceureumen,and panton Reu; which were more suitable for the development of food crops. While in the District of Woyla, Woyla Barat, Woyla Timur and Sungai Mas should be suitable for the development of field rice.

Based on these phenomes, it can be concluded that the development of the best commodity in West Aceh district has not fully linked with the potential existing of the region so that the desired results are not in accordance with the reality on the ground, in spite of the productivity, which is visible, increased. However, the productivity improvement is apparent, and it is certainly many factors that affect it, particularly the suitability of land in their respective districts in West Aceh district.

The potential area for the development of the commodity subsector is a great area for prime commodities (Aulia, 2020). This is evident in the development planning in the agricultural sector are based on the Spatial (area for the development of prime commodities commodities). However, problems encountered, particularly in natural resource management, which is oriented in environment still, has obstacles, in which, if the parties did not recognize it, this issue will result in a wasteful use of increasingly scarce resources in developing the potential in the region. This study aims to assess the suitability of the development of commodity-based potential of the region; feasibility of developing the best sub-sector prime commoditiess commodity in West Aceh and reviewing commodity development strategy for the prime commodities sector of sub districts in West Aceh district.

THEORETICAL REVIEW

In this theoretical study, it will be presented about the theory of the best commodity development strategy that is based on the theory of agricultural development, the agricultural sector's contribution to GDP, the agricultural land suitability determination, the determination of the best commodity. Similarly, previous studies that have relevance to this study based on facts and previous researchers once investigate reality.

The concept of regional development is based on cluster. This concept focuses on resource linkages and dependencies between actors in a network of production to services and innovation efforts development. Successful clusters are clusters of specialized, competitive and comparative advantage, and externally oriented. Rosenfeld (1997) identify the characteristics of successful cluster region, namely the product specialization, local network, good access to capital, and research and development institutions as well as education, have a qualified workforce, good cooperation between companies and other institutions, follow technological developments, and the presence of a high level of innovation. Agussabti and Romano (2011) argue that the development of the best commodity management programs in Aceh province was primarily aimed at improving the competitiveness of regions and their products, which based on the vision and mission of the local government. Then prepared development strategy, and develop government and business relations. In this case the required number of policies, including: (1) investment policy, which is linked to the best region's flagship product, incentives and promotions, (2) regional development policies, that carried out through the identification of determinants of industrial development, vision formulation of industrial development area, and identification of the appropriate support strategies, (3) trade policy, which governs trade relations between regions and between sectors, and to minimize the constraints, (4) the policy development of physical and non-physical infrastructure (HR), (5) institutional development policy, which includes a mechanism decision-making in the government, creating regulatory, and social and cultural conditions. Those Step-by-

step strategies, then in this study will be examined the level of development, potential, and community institutions (districts), which is in an area of existing development planning in this case is sub-districts in West Aceh district. In this study, the writer intended to know the level of growth and development progress in West Aceh district in accordance with the potential of the region that included community institutions that can support sustainable development.

The Prime commodities can be seen in terms of supply and demand. In terms of prime commodity is a commodity that provides more power task than any other commodity. It is related to the condition of the land, the use of technology and socio-economic community, while the two are agricultural commodities that have high competitiveness, both domestic and overseas markets (Syafaat, 2000). According to Tarigan (2006) prime commodity is a prior commodity, which have high added value and meet the attractiveness or high thrust (budget backward and forward linkage).

Determination of commodities, which are based on social and economic benefits, derived from these commodities' development efforts. The prime commodity requires the maximum utilization of local charges, so the benefit derived mostly distributed in that region. Job creation, income generation of entrepreneurs and contribute to revenue. Specifically, prime commodity must also be financially feasible for cultivated.

Feasibility the prime commodity can also be assessed from the point of viability of farming. As it is understood that the primary goal of farming is to meet the needs of families and for the needs of the market (Daniel, 2004). If farming can provide a significant impact, it will encourage farmers to increase their production (Johnson, 1992).

The potential of West Aceh district in prime commodities sub-sector in prime commodities commodities particularly, it should be directed to a prime development program, which has a markets-oriented, have high competitive advantage, and with regard to the preservation of nature. It can be obtained through a strategy that is appropriate to the regional potential, the regional potential of a region would be better if there is a match

between the existence of natural resources, human resources who are capable of managing these resources as needed and do not damage the ecosystem being available naturally.

According to climate and land potential in West Aceh district, it only suitable for the cultivation of annual crops because of the rainfall and the slope factor West Aceh district is located close to the equator, so the region is classified as tropical region. Its average air temperature ranges between 28°C-33°C. Prime commodities commodities, particularly smallholder crops subsector which has an important role in the development of the current farm. West Aceh district, especially in the sub-region have the potential for development of prime commodities commodities in particular smallholder crop. For the analysis of the prime commodity in the area will be used dimensional potential of the region, and the existing condition of smallholder by its necessity and adequacy. For devices are having the potential climate and land suitability. The device is adequacy competencies of the growth community in such commodity.

Furthermore, after discovering the prime commodities that are ranked based on technical criteria and economic will be investigated its development strategies of such commodity. The first step is to analyze the secondary data of existing conditions prime commoditiess in West Aceh district. Furthermore, comparing the results with each LQ production centers based on the potential of the region. This step will result selected prime prime commodities commodity in each development region. The second step is to analyze the feasibility of the development of selected commodity in West Aceh district. If the development is approved, the third step is to follow the verification of the commodity development strategy between the strategy or specialization and diversification.

METHODS OF STUDY

A number of methods that are summarized in hierarchy process approach conducted this research. The first method is a method of exploratory in which the secondary data were got from the general condition of

the existing prime commodities in the last five years (2015 to 2020). Then, the maps of potential land and agro-climatic conditions in West Aceh district were collected. By doing so, these basic commodities of the prime commodities districts of West Aceh will be determined.

The second method is a survey method. It was done by interviewing the paddy, hazelnut, nut, peanuts and sweet potato farmers. The sampling technique used is a three-stage random sampling group (Cluster Multi Stage Random Sampling). The population is farmers of prime commodities commodity of West Aceh district. The first stage is to select 10 districts as the center of production of prime commodities commodity of West Aceh. The second stage is the selection of village of production centers in each district elected. The third stage is the selection of farmers as the sample, who are drawn randomly according to the type of commodity prime commodities cultivated by 25% of farmers who manage the prime commodities. Each district-selected commodity will determine total population. Total population is a number of households that have five commodities that will be selected. In accordance with the requirements according to the type and source of data can be explained by the need answering the research problems. To answer the research objectives (1) it is required secondary data, which was collected from reports of Prime commodities Office West Aceh, BAPPEDA, and BPS West Aceh. To answer the research objectives (2) it needs primary data needed to be collected from 25 percent farmers selected based on the prime commodities. Furthermore, to answer the purpose of the study (3) it is required secondary, primary, and verification data results of *Focussed Group Discusión* (FGD) with the chief of Agriculture Production, Extension Crops and farmers who seek commodity prime commoditiess in West Aceh district.

The analysis model used is in accordance with the hypothesis derived in this study. To answer the hypothesis in this study, some of the analytical tools that are used are as follows:

Hypothesis 1: Establishment and development of subsector prime commodity has not been based on the potential of the district of West Aceh.

To test this hypothesis, it performed the analysis stage as follows. The first is that based on the above five parameters sorted priority commodities in the West Aceh district. Cross correction is then performed to find the sub-center commodity production. The second phase is that, an analysis tool used is Location Quotient (LQ) is calculated by the following formula (Warpani, 1984):

$$LQ = \frac{(Si/\ Ni)}{(S/\ N)} \quad or \quad LQ = \frac{(Si/\ S)}{(Ni/\ N)} \quad \text{………………….……..(1)}$$

Where:
   LQ = coefficient of prime commodities locations
   Si = Volume of commodity i at the regional / district
   S = Volume of prime commodities the regional / district

   Ni = Volume of commodity i at the district level
   N = Volume of commodity prime commodities district
   LQ numbers indicate the following:
   a. LQ> 1, suggesting these commodities including commodity base.
   b. LQ <1, indicating these commodities including non-commodity basis.
   c. LQ = 1, indicating the commodity can only meet its own territory.

This analysis aims to identify the basis commodity and not a subsector base commodity in an area. In principle, these parameters compare to the ability of a region to produce a commodity with other areas that are producing the same commodity.

To obtain a commodity that is considered the potential of a region, the analysis performed on the important sub-sector commodities prime commodities in Southern West Aceh. In this study, commodity potential of the region is a particular commodity that has reliability in terms of certain criteria. Correction of cross-commodity criteria chosen also used the following criteria: (1) market criteria, (2) technology, (3) the environment, (4) comparative advantage, (5) competitive advantage, (6) revenue and (7) unique commodity.

Market criteria are: high market demand and satisfy market preferences; commodity market segment (c) can generate income (d) an import substitution. Criteria agribusiness technology, which consists of: (a) the availability of seeds or seedlings on an ongoing basis (b) acquisition of technology in making seeds or seedlings (c) acquisition of advanced cultivation technology (d) control of post-harvest technology (processing) the edge. Environmental criteria, including: (a) the products are free of pesticides; (b) meet the standards of health, (c) safe the environment. Criteria comparative advantages, including: (a) in accordance with the nature of the soil and agro-climate and locality, (b) local natural resources, (c) the supply of industrial raw materials, (d) the relationship forward and backward. Criteria competitive advantages, which include: (a) economic value and benefit, (b) the value-added and high margin, (c) product quality, (d) able to compete with other regions. Revenue contribution criteria include: (a) to increase local income, (b) a source of income of farmers or agribusiness; (c) expanding employment opportunities, (d) a high economic impact on the community and region. Criteria uniqueness and regions include: (a) specific products found only in certain areas, (b) is characteristic of the region, (c) have unique characteristics. Commodity development strategy of both specialization and diversification by using several analytical tools that include:

a. Localization coefficient (α)

Used to determine the spread of commodities activities in an area, so we will know the level of agglomeration.

$$\alpha = \left\{ \left(\frac{Si}{Ni} \right) - \left(\frac{S}{N} \right) \right\} \quad \dots\dots\dots(2)$$

Summing the values of a region that α value is positive.
Where:

α = Coefficient of Localization

Si = Number (income, production) commodity i at the regional level

S = Total (revenue, production) commodities regional level

Ni = Number (income, production) commodity i at the district level

N = Number of total (revenue, production) commodities district

The value gives the following indications:
a. α = 1, indicating the localization of commodities activities centered
b. α <1, indicating the localization of activities of commodity spread.

b. Specialization coefficient (β)

Used to determine the specialization of a region in a particular activity, so we may know the reliability of comparative.

$$\beta = \left\{ \left(\frac{Si}{Si} \right) - \left(\frac{Ni}{N} \right) \right\} \quad \dots\dots(3)$$

The way: by adding up the value of a territory that is positive.
Where:

β = coefficient of Specialization

Si = Number (income, production) commodity i at the regional level

S = Total (revenue, production) commodities regional level

Ni = Number (income, production) commodity i at the district level

N = Number of total (revenue, production) commodities district

Figures β indicates the following:
a. β = 1, indicating an area specializing in commodities activities.
b. β <1, showed no activity specialized commodity n in a region.

RESULTS AND DISCUSSION

The income of the greatest contributions obtained from commodity of paddy. Next, successively: commodity hazelnut, peanuts, coffee, nuts, cocoa and sweet potato. Paddy is a commodity that has the most contribution to the production of oil and the region's economy, and then followed by cassava, eggplant and peanuts. In other words, if you consider the aspects of commodity, paddy prime commodities production becomes a major contributor to the production in West Aceh district (Simbolon, 2021). Coffee and Peanuts is the most commodities in demand as shown by the trend of the highest production values. Besides, it also shows the value of sustainability in getting the commodity. In terms of market certainty, sweet potato and cassava commodity showed high enough for market indicators values. Besides that, these indicators also provide information capabilities competitiveness of these commodities in the market in district, to provincial market district. On the criteria of employment, paddy is a commodity that has the highest employment rate. On the consumption indicator that is defined as the ability to increase income and to meet domestic needs, there are two types of commodities that have the highest value of the indicator, they are Paddy and cassava.

In addition to demonstrating the value of each indicator criteria, can be used as basis for determining the policy partially. In Paddy and Peanuts commodities, when the government expects the policy focus on the value of the farmer's household income, so commodity that should be driven are Peanuts and Zeamays, when expecting the fulfillment of domestic needs such as price fluctuations and so on, as often happens, the focus of development is for commodities of sweetpotato, soybean, cassava and so on. If the government expects the policy focuses on trade, so the commodity that should be driven are eggplant and peanuts, while growth in terms of employment, the government will focus on the development of paddy, sweetpotato and cassava. Ranked commodity is used to be able to see where the commodities are prioritized in order to capture the wisdom partially such as to increased production, or to increase the competitiveness of commodities or addressing the needs of domestic consumption.

Determination of Regional Development Centers Prime commodities

The analysis of the criteria of the indicators determining commodity prime commodities done for 7 types of prime commodity. This analysis is to see how far the variability of each candidate commodity, as the basis for determining the location of commodity development at district level. Variability of each candidate's variety of commodity, as the basis for determining the location of the development of commodity used district-level criteria: (1) the level of suitability of agro-climate and ecology, (2) the contribution rate of harvest area, (3) trend or development area harvested, and (4) employment. In terms of agro-ecological suitability, or may be the development of these commodities can be cultivated in most districts. In terms of contribution to the suitability of agro-ecological indicators of the highest values for each commodity is generally located in the district of West Aceh for paddy, zeamays, peanuts, cassava, nuts, eggplant and sweetpotato. When broken down by sub-center for the production of the twelve districts have specific commodity production centers respectively. Johan Pahlawan, Bubon, Woyla,Woyla Timur, Mereubo, and Panton Reu reaches the first rank production center, the commodities that are developed such as paddy, paddy field, cassava, and zeamays. For Samatiga, Arongan lambalek, Woyla Barat, Kaway XVI and Pante Ceureumen district, only have paddy as their prime commodity.

The results above show that there is inconsistency because of the above criteria. On the basis of market criteria and parameters marketing premises market demand, market segments, generating foreign exchange and import substitution indicates that a first order paddy and cassava into seventh. Similarly, because of criteria agribusiness technology with the availability of seeds or seedlings parameters continuously, superiority and mastery of technology in making seeds or seeds, advanced cultivation technology mastery, mastery of post-harvest technology / processing date; still a prime of the first paddy

and cassava became the seventh prime. Based on environmental criteria with parameters pesticide-free product, meets health standards, friendly to the environment; paddy is also the first prime and cassava is the seventh prime.

Comprehensive Reliability Criteria

Comprehensive reliability criteria used in this study as recommended by Warpani (1984), based on: (a) Criteria Markets and Marketing, (b) Criteria for Agribusiness Technology, (c) Environmental Criteria, (d) Comparative Reliability Criteria, (e) Competitive Reliability Criteria, (f) Income and Welfare Criteria, (g) the criteria of uniqueness and regional as shown in Table 1.

Table 1. Reliability sequence Commodities Estate People Comprehensive.

RELIABILITY CRITERIA		People's Estate of Commodities				
		Paddy	Zeamays	Sweet potato	Peanuts	Cassava
A	Criterion Markets	26	24	18	11	18
B	Criterion Agribusiness Technology	21	16	11	12	16
C	Environmental Criteria	21	18	15	10	11
D	Comparative Reliability Criteria	35	24	19	18	29
E	Criteria Reliability Competitive	16	12	20	14	4
F	Income and Welfare	12	7	17	18	14
G	Uniqueness Criteria	10	4	12	2	6
	Total Score of Reliability	141	105	112	85	98
	Reliability sequence	1	3	2	5	4

Source: Primary Data (processed), 2022.

Because of comparative reliability criteria parameter conformity with the nature of the soil and agro-climate and locality, local natural resources, the supply of industrial raw materials, linkage to the front and to the rear; paddy stands in the first line and sweet potato stands in the seventh line. Because of the criteria of reliability competitive with the parameter values and the economic benefits, value-added and high margin, quality, can compete with other regions; well be the first order of paddy and cassava into the final sequence. Because of the criteria of income and welfare of the meter with the ability to increase revenue, sources of revenue farmers or agribusiness, expanding employment, high economic impact on the community and region; then topped sweet potato and cassava ranks seventh. Similarly, the basic criteria of uniqueness and areas with specific product parameters are only West Aceh district, the hallmark of the region, has unique characteristics; then sweet potato into the first order. In addition to the analysis based on these criteria, the determination of the potential of the region's commodities is also done through the analysis of soil and agro-climatic appropriateness. The analysis was conducted by reviewing the agro ecological typology at West Aceh regency ranging from biophysical land characteristics (soil properties and climate) as the main parameter distinguishing between agro ecological zones. The results of such analysis are the describing of the agro-ecological zoning (AEZ) boundaries that have a similarity or likeness biophysical characteristics and the type of land use. In appendices 13 to 19 because of land and agro-climatic suitability map shows that most areas of West Aceh district classified as suitable for the development of seven commodities with the potential development of the prime commodities as shown in Table 2.

Table 2. Broad Commodity Crops and Potential Development of Prime commodities Crops Dependable People in the district of Southern West Aceh.

Prime Commodity	Area Planted (ha)	Potential Development (ha)	Area Potential (ha)	Relative Potency (%)
Paddy	14.293	15.960	30.253	211,66
Soybean	1.134	1.160	2.294	202,29
Zeamays	3.329	2.350	5.679	170,59
Peanuts	2.918	2.950	5.868	201,10
Cassava	1.466	1.500	2.966	202,32
Egg plant	1.373	1.400	2.773	201,97
Sweet potato	518	550	1.068	206,18

Source: Primary Data (processed), 2022.

Table 2 shows that because of extensive planting of sweet potato and eggplant into the final sequence for reliability criteria of prime commodities in this area. However, based on the relative development potential, it turned out to be the order of the first eggplant prime commodities that can be cultivated in the future. This means that the development of prime commodities has not referring to the potential of the region and agro-climatic conditions as well as economic value.

The last step to determine whether it is appropriate or not, is to compare the value of LQ with the results of the analysis of potential areas. The analysis showed that the sequence subsector commodity did not equivalent to be developed based on both the analysis, as shown in Table 3.

Table 3. Comparative sequence Commodities prime Based on Relative Potential and Number of Sub-District as Commodities Base (LQ> 1).

Prime Commodities	Relative Potency (%)	Order	Number District LQ> 1	Order
Paddy	211,66	1	11	1
Sweet potato	206,18	2	5	4
Zeamays	170,59	5	7	3
Cassava	202,32	3	9	2
Peanuts	201,10	4	7	3

Sources: primary data (proceed), 2022

Table 3 shows that based on the relative potency of West Aceh regency order first commodity is eggplant, the second is the peanuts. However, based on the number of districts with a commodity base (LQ> 1) then paddy as the first crop and eggplant is the final commodity sequence. Although the analysis is not consistent in his own order, but the seventh prime commodities is acceptable as commodity West Aceh district.

LQ analysis performed to determine whether commodity subsector that has been developed has been designed in accordance with the existing regional potential in each district. Result of LQ for smallholder sub-centers of production are shown in (Appendix 16). In this appendix, it can be seen that because of production, all the prime commodities has been developed in accordance with the potential region. This means that the working hypothesis is acceptable. LQ value indicates that for all commodities are above LQ> 1, indicates these commodities including commodity based in each sub-district. Only in two districts that have some third and fourth commodity in which LQ <1, this shows these commodities include into non-commodity basis; however, it has been developed in this area in the district

such as paddy Johan pahlawan, Kaway XVI and Woyla

The results of this analysis indicate that the development of commodity basis and not because of commodity subsector in West Aceh district is not absolutely based on the ability of the land to produce production. As has been described on the land suitability map, there was not all commodities are being developed potentially in their respective districts. For Johan pahlawan district, the most areas are suitable for the development of peanuts, but peanuts production in this area is very small. Thus, the LQ analysis states peanuts is not a commodity base, with LQ = 0.10. Another important thing to be observed is that the cultivation of commodity base in areas not intensively West Aceh district. Therefore, the base commodity does not yet have reliability criteria in terms of the source of livelihood.

Thus, the hypothesis (1) can be accepted that the development of smallholder commodity in West Aceh district is not consistent with the potential of each sub-region production centers. Some of the factors that cause this inconsistency, among others: (a) the development of smallholder not comply with the master plan of Aceh prime commodities that have been published since 2009, (b) most of the estates of the people in West Aceh district organizations still rely on the understanding of the commodities are still low, (c) has not been allocated a budget for the construction of optimal prime commodities; (d) low active role higher education institutions to examine the suitability of the potential of the region by commodity area.

Eligibility Prime Commodities

Five commodities that have been generated from the hierarchy and LQ defined as commodities analyzed feasibility. Eligibility is analyzed financial feasibility and economic viability. Financial feasibility based on investment criteria, assuming the use of technology, the means of production and the intensification of the real estate business respondents.

The analysis showed that the five prime commodities in West Aceh should be developed with the investment criteria NPV, Net B / C, IRR, PBP BEP and are shown in Table 4.

Table 4. Summary of Investment Eligibility Criteria Five Prime Commodities Dependable People In West Aceh district in 2023.

Commodity	Investments Criteria				
	NPV	Net B/C	IRR	BEP Productivity	PBP
Paddy	1.613.938	1,39	19,39	493	24
Zeamays	3.904.801	1,39	21,11	101	16
Peanuts	34.148.985	2,34	29,40	347	11
Cassava	180.304	1,02	18,98	694	18
Sweet potato	38.916.889	2,82	34,07	261	8

Source: Primary Data (processed), 2022

Based on the five investments criteria above, prior estate commodity of the most viable is the first peanuts, sweet potato as the second, the third is zeamays, paddy as the fourth and cassava nut as the fifth.

In terms of the five commodities revenue are not causing the income gap between the development areas. As we understand that, the different income arises because of differences in the ownership of resources and factors of production. For those who have more production factors, will earn more revenue as well. To measure the relationship of income to the type of business use is the cumulative percentage of farm families head planters with a cumulative percentage of income derived from farming seven prime commodities above during the period of a year.

Table 5. Cumulative Number and Proportion of Households and Income of Farm Prime
commodities Prime in Regional Research.

Commodity	Nmber of Farmer Households (HH)	Production Value (Rp.000)	Proportion of HH Farmers (%)	Percentage of Income (%)	Cumulative HH (%)	Cumulative Revenue
Paddy	14.557	35.820.000	54,34	31,58	54,34	31,58
Zeamays	2.707	39.528.000	10,10	34,85	64,44	66,43
Peanuts	5.742	20.496.000	21,43	18,07	85,88	84,51
Cassava	2.973	9.174.000	11,10	8,09	96,98	92,59
Sweetpotato	810	8.400.000	3,02	7,41	100	100
Number	26.789	113.418.000	100	100		

Sources: Dishutbun West Aceh district, 2022 (processed)

The developmental of paddy, zeamays, peanuts, and coffee provide a varied impact of increased revenues result of the development of this commodity (Aulia, 2023). Developmental of prime commodities are providing equitable distribution of income varies among districts production centers. When we refer to the theory of economic growth as a result of the higher intensity activity can lead to the unbalance development incomes. Moreover, this activity is impartial because the potential of different regions. Cumulative causation theory model is developed by Myrdal, 1957; Kaldor, 1970, and Dixon, 1975 (quoted by Chief, 1997). This theory believes that market forces cannot eliminate the disparity between regions, but actually make a difference. In terms of Myrdal, strength backwash effect (negative feedback effect) is much higher than the effect of the spread (spread effect), because the transfer of capital and labor between regions is unbalanced.

So far, peanuts and sweet potato is a contributor of lowest value to the income. This is because the area of land and crop productivity is still very small. As noted in the previous section that, peanuts and sweet potato occupy sixth and seventh as a candidate commodities West Aceh regency. In terms of development potential commodities peanuts and sweet potato is still quite large. If we see from the results of the survey sample farmer apparently dominant contribution sweet potato farm approximately 48 percent of its revenue. In broad terms sweet potato plants that have been cultivated by the people in the

three main districts is less than 0.5 hectares per family. People's desire to develop the commodity is still constrained by several factors including: (a) seeds, (b) institutional UPT, and (c) the agribusiness system.

Theoretically, growth centers commodities sweet potato on each area needs to be supported by the synergistic agribusiness system, and has been continuously developed. According to Saragih (2007) agribusiness commodities prime commodities should be based on the potential development of the area and a map of commodities. Referrals to the development of agribusiness commodities West Aceh district should be oriented towards high-value agricultural commodities especially paddy, as proposed (Kasryno, 2006). Starting from various types of agricultural areas may be determined as specific areas for sweetpotato commodity development. Determination of priority commodities is based on the shift of the total area of prime commodities. Expansion and relocation centers indicating a shift in production from one district to another district.

Local sweetpotato seeds ever victorious in West Aceh district has now rare. Development of superior sweetpotato that has been spearheaded by the Department of Forestry and prime commoditiess most have yet adaptive Aceh. Sweet potato farmers in some districts still have no manage skilled intensive of farming in accordance with the technical requirements needed for superior sweetpotato. Sweet potato cultivation of local superior is easier because it can give results

without having to manage intensively. While superior sweetpotato recently developed is greatly in response to fertilization, but will not bear fruit if it is not nurtured.

Potential Relationship with Regional District Specialization or Diversification

Districts, as the smallest area unit has a different potential in developing both commodity specialization and diversification. In accordance with the revenues of David Hendri (2005) that in order to determine the development of areas that can be optimized by specialization or diversification of commodities by using several analytical tools that, include: (a) localization coefficient (α), (b) specialization coefficient (β).

(a) Localization coefficient (α)

Analysis of deployment activities to develop commodity in West Aceh district describes the level of agglomeration. The production of each commodity crop prime commodities spread in different districts according to their production centers. Yet this has centered on the production center of each commodity. This is reflected in the coefficient of localization commodity, shown in Table

25. In the following Table 25 shows that only peanuts localization has the coefficient (α)> 1. Total production of paddy in 12 districts varies. Similarly, in five districts (Johan pahlawan, Mereubo, Kaway XVI, Samatiga, Woyla Barat and Woyla Timur), the distribution of production is spread evenly so that it can be concluded that the localization of a paddy grove is not centered. It is similar to peanuts, coffee, zeamays, cassava and sweet potato. From the testing of this hypothesis can be concluded that the development of smallholder commodity in West Aceh district not converge according to the polygon development.

(b) Specialization coefficient (β)

The analysis of Specialization coefficient (β) used to determine the commodity specifications developed in a particular sub-region, to know the reliability of comparative. Components of the proper parameters in the analysis are the income that comes from smallholder farming especially in certain commodities. The results of the analysis for the seven prime commodities in Great Aceh district shows the value of β <1, as shown in Table 6.

Table 6. Parameter Analysis of Specialization and Diversification of Commodities Estate People in West Aceh district.

Commodity	Total District LQ> 1	Coefficient of Localization (α)	Specialization Coefficient (β)
Paddy	11	-1,16	-1,97
Zeamays	5	-1,10	0,93
Peanuts	7	0,41	-0,52
Cassava	9	0,46	0,47
Sweetpotato	7	-0,01	0,31

Sources: primary data, 2022

Referring to the basis of the distribution of districts with LQ values > 1 for all commodities, it shows that four or more districts have nearly the same commodity. This means that there is not any one district in West Aceh regency, which specialize commodity crops. All districts did diversify prime commodities in their respective territories.

Based on the theory of districts as the smallest unit has a key region criteria, among others: (a) The area has a regional economic

driver of economic activity, (b) The area should have the advantage of economic sectors that could encourage other sectors of economic activity in the region itself and the effect, and (c) Regions prime could not stand alone but must have relevance to the front and back with some areas / regions support (Napitupulu, 2015).

Potential superior production centers of sub-districts supported by the natural resources that still allow it to be developed requires a touch of technology and adequate

capital. Theoretically, it is necessary to have good planning, the main problems of technology and capital. Appropriate model should have a plan in accordance with the concept of development of a region. Economic base planning model as one of the approaches used in the identification of potential sectors that could be a driver of growth and development of the region is the economic base theory. According to this theory, the growth and development of a region depends on a request from outside the area to the production area. The economy of a region is divided into sectors or base and export base sector basis.

Developmental model cannot be applied and implemented in the event of discrepancy between the potential of the region with the ability of its resources, both capital and mastery comes to technology. The results indicate that the sub-region as the smallest unit in this area has the potential that varies according to the agro-climate, agro-ecological farming community and ability. In developing both commodity specialization and diversification are also highly dependent on the infrastructure and the amount of land available that meet the technical requirements.

The results above was for most districts (8 out of 12 districts) still use strategy-diversified development. Diversified commodity per district will reduce the risk. The greatest risk for the development is the change in direction of commodity demand, price, and risk of cultivation. To overcome these commodities development in all districts in West Aceh district uses strategy of diversification, as indicated by the value of β <1, each district developed more than one commodity and for every gardener to plant more than one crop prime commodities. There is a tendency that commodity becomes the top estates in the district is not a commodity basis, as growth in acreage and production is relatively slow. In contrast to above description, other commodities, which are not as the prime commodity, become the base commodity in the district.

These results are also in accordance with those obtained by Tobari (2007) that the prime commodities that have for developing the superior potential relatively faster in the district concerned, not necessarily a major

commodity. As an example, for sweet potato commodities that are mostly in Johan pahlawan and Woyla sub district, not becoming a commodity because its development is relatively more slowly and tend to be impaired in the sub-district or district other than the district as a whole. This is true also in commodities of peanuts in Kaway XVI and Woyla Timur District, despite the relatively faster growth is in the sub-district or district other than the district as a whole, but the commodity is not a commodity basis in two districts were thus not included into prime commodity of the sub-district.

Developmental of smallholder commodity in this area depends on the courage of farmers at risk. Commodity specialization encouraging high productivity, but may be lower incomes. Decline in demand and prices often lead to sluggishness in production, such as those experienced in the Johan pahlawan District, peanuts farmers and the Aceh island. Instead of rising prices and increased demand motivates acreage and production as happens in commodities peanuts in this area. In a period of three years (2015 to 2022) there is an increasing in acreage between 14 to 21 per cent in five production centers peanuts. Instead, there is a reduction of the peanuts harvest between 5 to 8 percent for peanuts production centers in West Aceh district. Most farmers seek more than one crop on the land. Thus, the revenue contribution of each commodity is relatively small. During the development of prime commodities, in this area have not been referring to the prime commodities master plan of Aceh province. As a result, patterns of diversification that relies on creativity farmers were more dominant.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

The developmental of smallholder commodity in West Aceh district have not been consistent with the potential of each sub-region production centers. Some of the factors that cause this inconsistency, among others: (a) the development of smallholder not

comply with the master plan of Aceh prime commodities that have been published since 2009, (b) most of the estates of the people in West Aceh district organizations still rely on the understanding of the commodities are still low, (c) a budget has not been allocated for the construction of optimal prime commodities; (d) low active role higher education institutions to examine the suitability of the potential of the region by commodity area.

Commodities, which elected, paddy, zeamays, peanuts, sweet potato and cassava has become a prime of the community as a source of livelihood of the prime commodities subsector. Commodity development strategy in West Aceh district best diversification strategy is based on the combination of the potential region, commodity types, and support for infrastructure to support agribusiness. Each district developed some commodity as well as to overcome the commodity price fluctuations.

Suggestions

Based on these results the Department of Forestry and prime commodities along with the Agency and other stakeholders to formulate a master plan recommended the development of agro-based prime commodities in each sub-district paddy production centers in West Aceh district. Prime commodities to the welfare of society is Paddy, Zeamays, Peanuts, Sweet potato and Cassava in which their development can be done based on agro-climatic and infrastructure sup ort agribusiness development Commodities.

REFERENCES

Agussabti dan Romano. 2011. Study Komprehensif Pengembangan Pala Sebagai Komoditas andalan Hubungannya dengan Perdamaian dan Keterlibatan Perempuan Dalam Pembangunan, FORUM PALA Aceh dan UNDP.

Aulia, M. R. 2020. Strategi Pengembangan Agribisnis Kabupaten Asahan Agribusiness Development Strategy of Asahan Regency. *Jurnal Agriust*, 69-75.

Aulia, M. R., Deras, S., Aminah, S., Siregar, M. P. A., & Berutu, P. 2023. Peran Penyuluh Pertanian dalam Kegiatan Kelompok Tani dan Hubungannya dengan Produktivitas Padi Sawah. *Fruitset Sains: Jurnal Pertanian Agroteknologi*, *11*(3), 157-164.

Badan Penelitian dan Pengembangan Departemen Pertanian, 2006. Pusat Analisis Sosial Ekonomi dan Kebijakan Pertanian *Jurnal Forum Penelitian Agro Ekonomi*. Vol.24. Page. 90-93

BPS NAD. 2006. *Produk Domestik Regional Bruto (PDRB). Triwulan II Tahun 2006*, Nanggroe Aceh Darussalam.

Budiharsono, S. 1989. *Perencanaan dan Pengembangan Wilayah (Teori, Model, Perencanaan dan Penerapan)*. Badan Perencanaan Pembangunan Nasional. Jakarta. 398 Page.

Bustanul A dan Didik J, 2005. *Pembangunan Pertanian*. Grasindo. Jakarta. 191 pages.

Dillon, AS., dan Aryo, 2010. Pembangunan Pertanian Terpadu, Konsep Wilayah dan Usahatani. Sinar Harapan, Jakarta.

Dinas Kehutanan dan Perkebunan Provinsi Aceh, 2008, *Promosi Komoditas Andalan Provinsi Aceh*, Laporan Tahunan Dinas Kehutanan dan Perkebunan Provinsi Aceh, Tahun 2007.

Djaenudin, Y. Sulaeman, dan A. Abdurachman, 2002. Pendekatan Pewilayahan Komoditas Pertanian Menurut Pedo-agroklimat di Kawasan Timur Indonesia, *Jurnal Litbang Pertanian* Vol. 21 No.1 Page. 87-89

Freddy Rangkuti, 2009. *Analisis Swot* Teknik Membedah Kasus Bisnis. PT. Gramedia Pustaka Utama. Jakarta.

Galindo,Isabel Morales, Regional Development Through Knowledge Creation In Organic Agriculture,*Journal Of Knowledge Management*,Vol 11 No 5,Emerald Group Publishing United,2007

Glasson, John. 1990. *Perencanaan Regional.* Terjemahan Paul Sihotang. Jakarta : Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia.

Hendri, David, 2005, *Sintesis Karakter Dalam Perancangan Kawasan Agropolitan*, Universitas Gadjah Mada, DIY.

Hadi, 2001. *Studi Dampak Kebijakan Pembangunan Terhadap Disparitas Ekonomi Antar Wilayah*. Disertasi. Program Pascasarjana Institut Pertanian Bogor.

Hendayana Rahmah, Aplikasi Metode Location Quotient (LQ) dalam Penentuan Andalan Nasional, *Jurnal Informatika Pertanian* Edisi Desember 2003 Bogor. Page. 112-115

Hidayat,Amir,Pengaruh Ekspor Pertanian dan Non Pertanian Terhadap Pendapatan Nasional : Studi Kasus Indonesia 1981-2003, Jurnal *Kajian Ekonomi dan Keuangan,Departemen Keuangan*, Edisi Desember 2004 Jakarta. Page. 55-62.

Hoover, Edgar M. and Frank Giarratani. 2002. An Introduction to Regional Economics : *How Regions Develop*. Needleman

Ismawan, A. 2004. *Pengembangan Komoditas pangan Utama dalam Pembangunan Wilayah Se eks Karesidenan Pekalongan*. Fakultas Pertanian Universitas Jenderal Soedirman, Purwokerto (Tidak Dipublikasikan).

Jayadinata, T. Johara. 1999. *Tata Guna Tanah dalam Perencanaan Pedesaan, Perkotaan dan Wilayah*. ITB, Bandung

Simbolon, R., Aulia, M. R., & Zebua, A. R. (2021). Analisis Faktor-Faktor Yang Mempengaruhi Harga Jual Gabah Usahatani Padi Sawah di CV. Sidomakmur Desa Saentis Kecamatan Percut Sei Tuan Kabupaten Deli Serdang. *Jurnal Agriust*, 24-32.