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Analysis of Agricultural Leading Commodities and Determination of Base Areas in Langkat Regency (Food and Horticulture Subsector)

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***Abstarct* - Determination of superior commodities in a region is the first step towards the development of agriculture based on the concept of efficiency. One way that can be taken is to determine the superior commodities. This study aims to analyze what are the leading commodities of agriculture subsector of food crops and horticulture, to analyze wherever which is the base area of the Exclusive Commodities in Langkat Regency. This research was conducted in all sub-districts in Langkat Regency and limited to food crops and horticulture commodities. The data used are secondary data on production and GDP of Langkat Regency in 2011-2016 and reinforced with primary data. The method of analysis used is Location Question (LQ), Growth Ratio Model (MRP) and Overlay. For land-based commodities such as food crops and horticulture in this study the calculations are based on commodity production. The results of the analysis of LQ and MRP method determined that the superior commodities of food crops in the form of sweet potatoes and superior commodities of horticultural crops are watermelon. The result of analysis of the overlay is the Basis area of food crops are Kutambaru and Stabat sub-districts (4 commodities), horticultural crops are Besitang Subdistrict (4 Commodities).**

Keywords: Location Quetion, Overlay, Base Areas, Leading Commodities

I. INTRODUCTION

Speaking of agricultural commodity Langkat Regency is one of the regencies in North Sumatra that has promising agricultural potential. From some agricultural business fields every year is still dominating. It can be seen and listed in Table 1 below:

Table 1: Langkat Regency GRDP by 2010-2016 Based on Constant Price (Percentage)

No	Bussiness Field	2010	2011	2012	2013	2014	2015	2016
1	Agriculture Forestry Fisheries	45.86	45.35	44.92	44.53	43.68	43.19	42.63
2	Mining and excavation	9.02	9.51	9.60	9.61	9.68	9.67	9.69
3	Processing industry	15.02	14.92	14.86	14.78	14.72	14.70	14.72
4	Procurement of Electricity and Gas	0.27	0.29	0.25	0.24	0.23	0.22	0.22
5	Water Supply of Waste Management	0.04	0.04	0.04	0.04	0.04	0.04	0.04
6	Construction	6.30	6.21	6.37	6.60	7.08	7.19	7.31
7	Large and Retail Trade	9.44	9.45	9.40	9.38	9.54	9.77	10.10
8	Transportation and warehousing	1.91	1.90	1.90	1.94	1.98	2.01	2.04

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9	Provision of Accommodation and Meals	1.78	1.81	1.87	1.91	1.93	1.95	2.00
10	Information and Communication	1.02	1.05	1.08	1.12	1.15	1.19	1.24
11	Financial Services and Insurance	1.52	1.61	1.74	1.80	1.85	1.87	1.89
12	Real Estate	2.51	2.51	2.59	2.65	2.71	2.70	2.69
13	Company Services	0.46	0.47	0.48	0.49	0.50	0.50	0.51
14	Administration of Defense and Social Security Governments Obligatory	3.05	3.11	3.16	3.13	3.11	3.17	3.09
15	Educational Services	1.18	1.15	1.13	1.16	1.17	1.18	1.18
16	Health Services and Social Activities	0.47	0.46	0.46	0.47	0.47	0.47	0.47
17	Other Services	0.16	0.16	0.16	0.17	0.17	0.18	0.19

Source: Data Processed from BPS (2017)

From the above data can be seen that agriculture is the largest sector contributes to the economy of Langkat Regency. From 2010-2016 the agricultural sector is the sector that has the largest percentage of Langkat Regency GRDP. From 2010-2016 the agricultural sector contributed> 40% of the total GRDP, but the high percentage of agricultural sector was not accompanied by the growth of the agricultural sector. It can be seen every year there is always a decline in agricultural contribution to PDRB Langkat.

II. METHOD RESEARCH

A. Location Question

Based on an understanding of basic economic theory, the relevant LQ is used as a method of determining the superior commodity especially from the supply side (production or population). For land-based commodities such as food crops and horticulture, the calculations are based on agricultural land (planting area or harvest area), production and productivity. In this study the calculations are based on the production of crops of each commodity, every sub-district and every year (2011-2016). Location Quotient (LQ) formula in Siagian (2013) is:

$$LQ = \frac{pi/pt}{Pi/Pt}$$

Where:

LQ = Location Quotient

pi = Production of certain commodities i at the sub-district level

pt = Total production of all commodities j at the sub-district level

Pi = Production of certain commodities i at the district level

Pt = Total production of all specific co-mods j at the district level

The value of LQ> 1 is a normative standard to be established as a pre-eminent commodity. If many commodities produce LQ> 1 then the degree of comparative advantage is determined based on higher LQ values in a region, because the higher the LQ value, the higher the commodity's superiority.

The results of LQ calculations yield three (3) criteria, namely:

a. LQ> 1; meaning that the sub-district is a base area or a source of production of certain commodities. This area has been able to meet their own needs and also can export to out of region.

b. LQ = 1; meaning that the sub-district is a base area or a source of production of certain commodities. However, this region is only able to meet its own needs and can not export out of the region

c. LQ <1; meaning that the sub-district is a non-base territory. This area is incapable

B. Growth Ratio Model

This method compares the growth of an activity both on a wider scale and on a smaller scale. There are two growth ratios in the analysis, namely the growth ratio of the study area (RPs) and the reference region growth ratio (RPr). RPr will compare the growth of each activity in the broader context of the region, while RPs compare the growth of activities in the smaller region (study area). Because that will be analyzed is the level of kecamatan (study area), then that will be calculated is the ratio of growth of superior commodity production in each kecamatan (RPs).

$$RPs = \frac{\Delta Yij / Yij\ (t)}{\Delta Yj / Yj\ (t)}$$

Where:

RPs = Growth Ratio of Study Areas

ΔYij = Yij (t + 1) - Yij (t) is the change of production of the sub-district commodity i

Yij (t) = commodity production at the beginning of the sub-district study period i

ΔYj = Yj (t + 1) - Yj (t) changes in total production of sub-district commodities i

Yj (t) = total commodity production year beginning of sub-district research period i

C. Overlay Analysis

The overlay analysis is intended to look at the description of the region's commodity production base that combines the contribution criteria and growth criteria. There are four possibilities in overlay analysis:

a) Contributions (+) and Growth (+), indicating that this subdistrict is a commodity base area of both the contribution criteria and the growth criteria.

b) Contributions (-) and Growth (+), indicating that this subdistrict is a commodity base area based on growth criteria.

c) Contributions (+) and Growth (-), indicating that this kecamat is an area of commodity base based on contribution criteria.

Contributions (-) and Growth (-), indicate that this kecamatan is not a commodity base area

III. Results And Discussion

A. Research result

The commodities studied in this research are agriculture sector which always contributes> 40% to Langkat Regency PDRB structure. This result is obtained from the calculation of contribution from data GRDP of agricultural sector, forestry and fishery year 2011-2016.

B. Commodities of Food Crops

The average LQ acquisition in Table 2 obtained all the subdistrict areas having at least one commodity that is superior comparative from the production side which is marked with the value of LQ ≥ 1. The result of the calculation of LQ of food crop can be seen in Table 2

Table 2: Average Value Analysis of LQ Commodity of Food Crops (2011-2016)

Districts	Rice Paddy	Rice Field	Corn	Cassava	Sweet potato	Soy	Peanuts	Green Beens
Bahorok	0,64	**10,35**	**1,56**	0,44	**18,9**	0,03	**1,95**	0,09
Serapit	0,83	**1,36**	**1,29**	0,17	**12,01**	**1,19**	0,52	0,25
Salapian	0,73	**10,85**	**1,34**	**1,76**	**11,29**	0	**3,12**	0,36
Kutambaru	0	**79,15**	**1,6**	**9**	**28,4**	0	**6,95**	**2,31**
SeiBingai	0,52	**1,07**	**2,73**	0,07	0,31	0,02	0,06	0,01
Kuala	0,72	**4,12**	**1,84**	0,73	**3,89**	0	**2,78**	**1,66**
Selesai	0,71	0,25	**2**	0,61	0,94	0,79	**2,47**	**1,39**
Binjai	**1,13**	0	0,49	**2,11**	**2,44**	**3,83**	**1,44**	0,87
Stabat	0,81	0	**1**	**4,74**	**2,57**	**5,3**	**2,99**	**8,44**
Wampu	0,8	0	**1,42**	**2,85**	**1,54**	**5,48**	**1,46**	**1,04**
BatangSerangan	**1,25**	0	0,19	**1,06**	**2,45**	0	0,42	0

SawitSebrang	0,17	0	**1,29**	**15,22**	**16,45**	0,36	**8,34**	0
Padang Tualang	**1,08**	0	0,31	**4,66**	**1,23**	0	**1,65**	**1,08**
Hinai	**1,16**	0	0,36	**1,42**	**1,51**	**2,56**	**2,03**	**7,43**
Secanggang	**1,23**	0	0,34	0,57	0,49	0,15	**1,03**	0,48
Tanjung Pura	**1,22**	0	0,2	**1,79**	**1,03**	0,77	0,75	0,73
Gebang	**1,33**	0	0,05	0,61	0,27	0,22	0,04	0,16

Based on Table 2 above there are several commodities that meet the value of LQ> 1. The most dominant LQ value can be seen in the rice field commodity in Kecamatan Kutambaru. With the value of LQ 79.5> 1 means that this field rice commodities are contributed a positive value, meaning that Kutambaru Sub-district is able to produce rice field commodities for its own region even able to export out of its territory.

Table 2 also explains the value of LQ> 1 is a pre-eminent commodity in which each kecamatan has a minamal of 1 superior commodity. The LQ value is the average LQ value over a period of 6 years in each Kecamatan and each commodity. For the District Bahorok there are 4 commodities that meet the LQ> 1 of Paddy Field, Corn, Sweet Potato and Peanut. This means that the sub-district Bahorok able to produce rice fields, corn, sweet potatoes and peanuts for the region even able to export out of its territory. Kecamatan Kutambaru is the base area of the four commodities above. However, in terms of LQ Kecamatan BaharokThe most superior commodity is Sweet Potato because sweet potatoes have greater contribution value than 3 other commodities.

Furthermore, to reinforce the superior commodities of food crops, ditelitui in terms of growth with MRP method. The calculation results in the value of Rps and can be seen in Table 3 below;

Table 3: Average RPS Value of Food Crop Commodities (2011-2016)

District	Rice Paddy	Rice Field	Corn	Cassava	Sweet Potato	Soy	Peanuts	Green Beens
Bahorok	0,599	-1,119	0,139	-4,501	**76,723**	0,000	-1,695	0,349
Serapit	-0,194	0,706	-0,451	-1,075	**127,843**	**4,081**	0,209	**7,499**
Salapian	**2,132**	**1,794**	-0,643	-5,395	-11,251	0,000	0,452	**2,037**
Kutambaru	0,000	-0,148	0,397	**1,083**	**6,389**	0,000	**4,769**	**3,834**
SeiBingai	0,723	**10,172**	**1,246**	**8,445**	**1,425**	-0,698	**3,628**	0,174
Kuala	0,776	-0,428	**1,371**	**7,020**	0,230	0,000	**4,974**	0,158
Selesai	0,012	-0,152	**2,426**	**2,189**	0,275	-11,987	-0,400	**2,842**
Binjai	**1,393**	0,000	**1,686**	-2,376	-4,511	**5,806**	**27,036**	**28,464**
Stabat	0,529	0,000	**4,846**	-1,450	**10,867**	**1,038**	**8,151**	**2,278**
Wampu	**1,208**	0,000	-0,827	-5,004	**2,868**	**6,894**	-62,933	-181,15
BatangSerangan	0,920	0,000	**2,790**	-0,238	0,211	0,000	0,459	0,000
SawitSebrang	0,586	0,000	**2,754**	-0,069	-0,151	-0,151	-0,916	0,000
Padang Tualang	**1,281**	0,000	0,209	-0,937	**2,266**	0,000	0,609	**1,222**
Hinai	**3,117**	0,000	-11,987	-35,716	-32,840	-124,513	-13,706	-11,600
Secanggang	**1,056**	0,000	**2,214**	-0,127	-18,879	-0,177	-1,856	-8,084
Tanjung Pura	**1,328**	0,000	-3,517	-14,126	-16,607	**1,532**	-	-0,010

							83,8059	
Gebang	0,987	0,000	**5,508**	**10,139**	**1,884**	-0,431	**1,082**	-29,464
Babalan	0,997	0,000	0,000	**1,413**	**6,978**	0,000	0,764	0,000
SeiLepan	0,328	0,000	**13,958**	-12,218	-1,670	0,000	**43,257**	0,000
Brandan Barat	**1,643**	0,000	-70,295	**2,341**	-1,333	-1,333	-1,333	**14,819**
Besitang	**1,567**	0,000	-3,670	-0,826	-6,343	**7,811**	-2,794	0,995
PangkalanSusu	0,238	0,000	0,020	-7,968	**41,589**	-0,632	**24,239**	**28,674**
Pematang Jaya	**1,048**	0,705	-1,634	-0,506	-4,007	**3,485**	-9,734	**1,090**

Table 3 is a calculation of the average RPs value over a period of 6 years. Serapit Subdistrict with sweet potato commodity has high value of RPs so if it is seen thoroughly Serapit District has the greatest growth value for sweet potato commodity. There are some values that are negative value means that area if viewed from the side of growth every year decreased. This decrease causes the growth value to be negative and furthermore the research should be done in detail.

Bahorok Sub District The value of RPs> 1 that meets is the Sweet Potato Commodity so that only growth of sweet potato commodity can grow every year so that more attention and research about the area of this commodity is needed. Then merged with LQ and MRP method so as to produce District Bahorok Commodities The commodity is Sweet Potato. All sub-districts have at least a minimum of 1 growth criteria in accordance with this analysis. Clearly all Commodities can be seen in Table 4 below.

Table 4. Food Crops Sub-sector Analysis

District	LQ	RPs	Overlay	Superior
Bahorok	Field rice, Corn, Sweet Potato, Peanut	Sweet potato	Sweet potato	Sweet potato
Serapit	Rice fields, Corn, Sweet potatoes, Soybean	Sweet potatoes, Soybean, Green beans	Sweet Potato, Soybean	Sweet potato
Salapian	Field rice, Corn, Sweet Potato, Peanut	Paddy rice, Paddy fields, Green beans	Padang Ladang	Padang Ladang
Kutambaru	Rice fields, Corn, Sweet Potatoes, Peanuts, Green Beans	Cassava, Sweet potatoes, Peanuts, Green beans	Cassava, Sweet Potatoes, Peanuts, Green Beans	Sweet potato
Sei Bingai	Field rice, Corn	Field rice, Corn, Cassava, sweet potato, Peanut	Paddy Field, Corn	Padang Ladang
Kuala	Rice fields, Corn, Uijalar, Peanuts, Green beans	Corn, Cassava, Peanut	Corn	Corn
Selesai	Corn, Peanuts, Green beans	Corn, Cassava, Green beans	Green beans	Green beans
Binjai	Rice paddy, Cassava, Sweet potato, Soybean, Peanut	Paddy rice, Corn, Soybean, Peanuts, Green beans	Rice Paddy, Soybean, Peanut	Peanuts
Stabat	Corn, Cassava, Sweet potatoes, Soybean, Peanuts, Green beans	Corn, Sweet Potatoes, Soybeans, Peanuts, Green Beans	Sweet Potatoes, Soybeans, Peanuts, Green Beans	Sweet potato
Wampu	Corn, Cassava, Sweet potatoes, Soybean, Peanuts, Green beans	Paddy rice, Sweet potato, Soybean	Sweet Potato, Soybean	Soy
Batang Serangan	Paddy rice, Cassava, Sweet potatoes	Corn	-	-

Sawit Sebrang	Corn, Cassava, Sweet Potato, Peanut	Corn	Corn	Corn
Padang Tualang	Rice fields, Cassava, Sweet potatoes, Peanuts, Green Beans	Paddy rice, Sweet potatoes, Green beans	Rice Fields, Sweet Potatoes, Green Beans	Sweet potato
Hinai	Paddy rice, Cassava, Sweet potatoes, Soybean, Peanuts, Green beans	Paddy rice	Rice Field	Rice Field
Secanggang	Paddy rice, Peanut	Paddy rice, Corn	Rice Field	Rice Field
Tanjung Pura	Paddy rice, Cassava, Sweet potatoes	Paddy rice, Soybean	Rice Field	Rice Field
Gebang	Paddy rice	Corn, Cassava, Sweet potato, Peanut	-	-
Babalan	Paddy rice	Cassava, Sweet potatoes	-	-
Sei Lepan	Paddy rice	Corn, Peanuts	-	-
Brandan Barat	Paddy rice	Paddy rice, Cassava, Green beans	Rice Field	Rice Field
Besitang	Rice paddy, Cassava, Sweet potato, Soybean, Peanut	Paddy rice, Soybean	Wetland Rice, Soybean	Soy
Pangkalan Susu	Paddy rice	Sweet potatoes, Peanut Beans Green	-	-
Pematang Jaya	Rice fields, Cassava, Sweet potatoes, Peanuts, Green Beans	Paddy rice, Soybean, Green beans	Paddy Rice, Green Beans	Green beans

From Table 4 above the commodities that meet for each analysis given value> 1 will be listed and experience positive growth every year. In LQ there are several commodities that fulfill, but for the dilution is examined more deeply with RPs so as to produce some commodities. Merging these two results produces food commodities for every district. Commodities in overlay columns are merely positive and positive growth commodities. Contributions (+) and Growth (+), indicate that this subdistrict is a commodity base area both from contribution criteria and plant criteria. As in Kuala District with Corn Commodities, or Salapian with Rice Field Crops.

Sub-district Kutambaru, Binjai, Stabat, Padang Tualang, Wampu, Besitang and Pematang Jaya have more than one commodity, so each commodity is seen its growth value every year who has the most dominant value so as to produce 1 most superior food commodity in each sub-district . There are some Sub-districts whose results do not have superior commodity if examined with the third analysis of Batang Serangan District, Gebang, Sei Lepan, Babalan and Pangkalan Susu.

From the results of the above analysis using LQ, MRP and Overlay method for food crops, it is concluded that the most superior commodity in Langkat Regency is Sweet Potato because it is the most widely spread commodity in every District in Langkat Regency.

C. Horticultural Crops Commodities

The average LQ acquisition in Table 5 obtained all sub-districts having at least one superior commodity comparative from the production side characterized by LQ ≥ 1. The results of the LQ calculation of food crops can be seen in Table 5 below.

on Table 5 above there are several commodities that meet the value of LQ> 1. The most dominant LQ score can be seen in Kangkung commodity in Bahorok Subdistrict. With the value of LQ 5.99> 1 means that this kangkung commodity contributes a positive value, meaning that the District Bahorok able to produce commodities kangkung for its own region even able to export out of its territory. By contribution of all who have value LQ> 1 is an area whose commodities are able to meet the needs of the region even after the fulfillment of its territory is able to send or distribute the production of its commodities to other regions.

Growth criteria means to see how much growth of commodity production from year to year to the production growth of each subsector. The following is the value of growth ratio of commodity production to growth of production of each

Table 5. Average Value of LQ of Horticultural Commodity per District in Langkat Regency

District	Watermelon	Cucumber	Spinach	Long beans	Chili	mustard	Eggplant	Kale	Tomato
Bahorok	0,075	0,37	**3,56**	**1,08**	0,93	0	**3,25**	**5,99**	0
Serapit	0	**2,36**	0,63	**2,6**	**3,51**	0,35	**1,83**	0	0
Salapian	0	**1,96**	0	**3,49**	**2,56**	0	**2,6**	0	0
Kutambaru	0	**1,16**	0,62	**2,45**	**2,22**	0,96	**2,19**	**3,43**	0
SeiBingai	0,1	**4,02**	0	**2,58**	**1,09**	0,21	0,9	0,39	**5,37**
Kuala	0,68	**1,17**	**1,08**	**1,98**	**1,42**	0	**1,37**	**1,9**	**2,55**
Selesai	0,97	0,79	0,31	**1,96**	**2,01**	0	**1,17**	0,49	0
Binjai	0,54	0,79	**2,17**	0,57	**1,02**	**2,85**	0,85	3,46	0
Stabat	0,33	**1,52**	**1,46**	**1,6**	**1,23**	**3**	0,99	0,66	0
Wampu	0,88	**1,17**	0,38	**1,58**	**1,44**	0,16	**1,66**	**1,15**	0
BatangSerangan	0,31	0,87	0	**2,16**	**2,43**	0	**2,2**	0	0
SawitSebrang	0,3	2,73	0	**1,55**	**1,35**	0	**1,94**	0	0
Padang Tualang	**2,7**	0,59	0	0,86	**1,46**	0	0,68	0,05	0
Hinai	0,5	**1,74**	**1,89**	**1,31**	**1,33**	**1,95**	0,84	0,09	0
Secanggang	**1,63**	0,7	0,11	0,99	0,96	0,08	**1,24**	0	**4,6**
Tanjung Pura	0,88	0,91	**1,14**	0,88	**1,09**	**2,38**	0,92	**1,12**	0
Gebang	**3,67**	0,64	0	0,84	0,92	0	0,31	0	0
Babalan	**1,56**	0,35	0	**1,47**	**1,33**	0	**1,16**	0	0,48
SeiLepan	0,95	0,22	0	0,56	0,64	0	0,3	**2,24**	0
Brandan Barat	**1,64**	0,68	0,13	0,37	0,45	0,07	0,73	0,12	0
Besitang	0,68	**1,52**	**1,11**	**1,46**	**1,86**	0,32	**1,57**	**1,57**	0,59
PangkalanSusu	0,91	0,49	**1,9**	0,42	0,68	**1,93**	0,39	0,65	0,54
Pematang Jaya	**1,72**	0,51	0,59	0,67	0,99	0,52	0,57	0,53	0

Table 6. Average RPs of Horticultural Crop Subsector

District	Watermelon	Cucumber	Spinach	Long Beens	Chili	Mustard	Eggplant	Kale	Tomato
Bahorok	0,964	**6,911**	-0,013	-0,300	**1,584**	**2,495**	-1,328	**2,614**	0,000
Serapit	0,000	0,848	0,281	0,765	0,700	0,278	**1,866**	0,000	0,000
Salapian	0,000	**4,368**	0,000	-0,319	**1,048**	0,309	**6,028**	0,000	0,000
Kutambaru	0,000	**3,292**	**1,075**	0,513	0,701	0,386	**1,602**	0,216	0,000
SeiBingai	-686,204	**7,572**	0,000	-3,830	-2,969	**1,918**	-24,196	0,727	0,851
Kuala	**5,860**	**8,018**	0,677	0,907	0,969	**1,691**	0,689	0,709	**1,122**
Selesai	**4,633**	-17,746	1,247	0,364	0,711	-0,523	-0,406	-0,666	0,000
Binjai	-19,776	**8,154**	**4,718**	**7,351**	**11,861**	**2,167**	**2,327**	**12,104**	0,000
Stabat	**2,459**	0,905	**1,969**	0,599	0,415	0,647	**2,762**	2,460	0,000
Wampu	**9,347**	**1,073**	0,837	0,468	0,870	0,682	0,959	-0,733	0,000
BatangSerangan	0,000	0,587	0,000	0,000	0,000	0,000	0,000	0,000	0,000

SawitSebrang	0,000	0,395	0,000	0,000	0,000	0,000	0,000	0,000	0,000
Padang Tualang	**1,963**	-0,333	0,000	-0,291	-0,020	0,425	0,067	-0,212	0,000
Hinai	**89,690**	-0,122	-3,221	-2,136	**1,525**	-3,398	-1,659	-4,285	0,000
Secanggang	**4,250**	-1,623	0,115	-2,568	-2,185	-1,984	-3,732	0,000	-1,813
Tanjung Pura	**5,282**	0,664	**2,806**	-0,153	-0,305	0,933	0,876	**2,387**	0,000
Gebang	**1,105**	**1,943**	0,000	0,299	0,723	0,349	-0,601	0,000	0,000
Babalan	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
SeiLepan	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
Brandan Barat	**2,706**	0,194	0,220	0,114	0,921	0,530	0,668	0,200	0,000
Besitang	**4,280**	**1,762**	**1,242**	0,556	**1,395**	**2,743**	**1,324**	0,604	0,000
PangkalanSusu	-5,798	-0,091	0,161	-0,015	-0,120	-1,593	-1,442	-0,888	0,888
Pematang Jaya	**3,134**	0,646	0,283	-0,379	1**,051**	0,461	**1,418**	-0,115	0,000

In Table 6 there are some values that are negative value, which means the region is seen from the side of growth every year decreased. This decrease causes the growth value to be negative. Hinai Sub-district has the most dominant RPs> 1 value in watermelon commodity that is experiencing growth of 89,690. There are 5 districts that have no superior commodities at all, namely Batang Serangan District, Babalan, Sawit Sebrang, Sei Lepan and Pangklan Susu. The result of combining with LQ and MRP method can be seen in Table 7.

Table 7. Overlay Analysis of Horticultural Crop Subsector

District	LQ	RPs	Overlay	Superior
Bahorok	Spinach, Long Beans, Eggplant, Kale	Cucumber, Chilli, Sawi, Kangkung	-	-
Serapit	Cucumber, Long Beans, Chili, Eggplant	eggplant	eggplant	eggplant
Salapian	Cucumber, Long Beans, Chili, Eggplant	Cucumber, Chili, Eggplant	Chili, Eggplant	eggplant
Kutambaru	Cucumber, Long Beans, Chili, Eggplant, Kale	Cucumber, Spinach, Eggplant	Cucumber, Eggplant	Cucumber
Sei Bingai	Cucumber, Long Beans, Chili, Tomato	Cucumber, Sawi	Cucumber	Cucumber
Kuala	Cucumber, Spinach, Long Beans, Chili, Eggplant, Kale, Tomato	Watermelon, Cucumber, Sawi, Tomato	Cucumber	Cucumber
Selesai	Long beans, Chili, Eggplant	Watermelon, Spinach	-	-
Binjai	Spinach, Chilli, Sawi,	Cucumber, Spinach, Long Beans, Chili,	Spinach, Chilli,	Chili

	Kangkung	Sawi, Eggplant, Kale	Sawi	
Stabat	Cucumber, Spinach, Long Beans, Chili, Sawi	Watermelon, Spinach, Eggplant, Kale	Spinach	Spinach
Wampu	Cucumber, Long Beans, Chili, Eggplant, Kale	Watermelon, Cucumber	Cucumber	Cucumber
Batang Serangan	Long beans, Chili, Eggplant	-	-	-
Sawit Sebrang	Cucumber, Long Beans, Chili, Eggplant	-	-	-
Padang Tualang	Watermelon, Chili	Watermelon	Watermelon	Watermelon
Hinai	Cucumber, Spinach, Beans, Chili, Sawi	Watermelon, Chili	Chili	Chili
Secanggang	Watermelon, Eggplant, Tomato	Watermelon	Watermelon	Watermelon
Tanjung Pura	Spinach, Chilli, Sawi, Kangkung	Watermelon, Spinach	Spinach	Spinach
Gebang	Watermelon	Watermelon, Cucumber	Watermelon	Watermelon
Babalan	Watermelon, Long Beans, Chili, Eggplant	-	-	-
Sei Lepan	Kale	-	-	-
Brandan Barat	Watermelon	Watermelon	Watermelon	Watermelon
Besitang	Cucumber, Spinach, Long Beans, Chili, Eggplant, Kale	Watermelon, Cucumber, Spinach, Chilli, Sawi, Eggplant	Cucumber, Spinach, Chili, Eggplant	Cucumber
Pangkalan Susu	Spinach, Sawi	-	-	-
Pematang Jaya	Watermelon	Watermelon, Chili, Eggplant	Watermelon	Watermelon

In Table 7 Commodities in the overlay column are merely positive and positive growth commodities. Contributions (+) and Growth (+), indicate that this sub-district is a commodity base area both from contribution criteria and growth criteria. As in District Wampu with cucumber commodities and District Padang Tualang with semangkaya commodities.

From the results of the above analysis by combining the three methods then obtained commodities watermelon and cucumber which is the most emerging commodities. However, the overall commodity of horticultural crops in Langkat Regency is watermelon because it has a higher contribution value of growth than cucumber commodity.

IV. Conclusions And Suggestions

A. Conclusion

Based on the research results can be compiled several conclusions as follows:

1) Main commodities in Langkat Regency are Sweet Potato and Watermelon

2) Basis area of food crops are Kutambaru and Stabat sub-districts (4 commodities), horticultural crops are Besitang Subdistrict (4 Commodities). Non-commodity-based commodity areas of food crops are Batang Serangan Sub-district, Gebang Sub-district, Babalan Sub-District, Sei Lepan Sub-district and Pangkalan Susu Sub-district. Horticultural crops are Kecamatan Selesai, Batang Serangan District, Sawit Sebrang Sub-District, Babalan Sub-District, Sei Lepan Sub-District and Pangkalan Susu Sub-district.

B. Suggestion

1) 1It is necessary to conduct further research using more complete and accurate data, including soil chemical properties data so that more detailed and accurate land evaluation is produced and the strategy of developing the superior commodities from farmer and stakeholder side.

2) The agricultural sub-sector that I analyzed is still in the form of food, and horticulture so it needs to be done again research for subsector of plantation, fishery and forestry.

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