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GULA SEMUT AREN AS A LEADING AND POTENTIAL COMMODITIES OF SMALL AND MEDIUM MICRO BUSINESSES (UMKM) IN INDONESIAN INTERNATIONAL TRADE

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Abstract---*Gula Semut Aren include traditional products that are easily found on several islands or regions of Indonesia, from Aceh to West Papua. This product can be a potential Indonesian Small and Medium Micro Businesses (UMKM) commodity for the world market if it is managed wisely and professionally. The purpose of this study is to uncover the potential side of palm sugar as Indonesia's leading Small And Medium Micro Business commodity in the fulfillment of world-class ant sugar products through export and import mechanisms in the next five years. Data analysis techniques used multiple linear regression with the following stages of research; 1) Collecting data and information from the field and secondary data sources, 2) Comparing data from research results and other sources of reference in accordance with the needs of the problem formulation, 3) Drawing conclusions from data trends to answer the scientific allegations from the research that was developed. The research results show that Indonesia in 2017 only contributed 3% to meet the world market of ant sugar. The remaining 97% was controlled by other countries such as 1) China, 2) the Netherlands, 3) the United States, 4) France, 5) Belgium, 6) Belgium, 7) Ireland, 8) Germany, 9) Korea Republic, 10) Indonesian, 11) Thailand, and 12) Other Country, while for the next 5 years, it will contribute 4.78% to meet the world market for this ant sugar. 95.22% controlled by other countries as above. Based on the results of the study it can be concluded that Indonesian palm sugar has a huge potential for the world market in the future, this condition is supported by other factors such as; 1) The percentage of Indonesian market space for this product is 95.22%, 2) The area of Indonesia's tropical land is wider than other countries that are overgrown with palm or kawung trees, 3) The human resources of palm or kawung farmers can still be developed, 4) Institution of Small And Medium Micro Businesses as Pivot developer farmers are still passionate about this sector.*

Keyword---*Small And Medium Micro Businesses, Palm Sugar, Traditional Product, Palm Sugar, Main Commodity.*

I. INTRODUCTION

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Palm sugar is a traditional product that is easily found on several islands or regions of Indonesia, from Aceh to West Papua. The existence of this product is related to the culture of an area, meaning that the more converted an area by the current culture, the more difficult this product will be found, but conversely if the more intact the culture level of an area, the easier it will be found. This product is attached to nature, tools, tablespoons and traditional all-round processes starting with the palm tree (Kawung), climbing ladder (sigay), a punch on the arm of the roomie (ninggur), the sapper carrying water made from bamboo (lodong) , boiling water (naheur nira), to maintain the thickness of the sugar ingredients and made into dry sugar flour or often called the Palm Sugar Palm Sugar. All of the tools and processes above are only owned by the traditional cultural environment including climbing sap trees. Apart from that, almost all of these sugar products are produced from wild palm trees in the forest, except in parts of Medan, South Sumatra, Siak-Riau and Hariang Banten which have started to try to cultivate these palm trees or roomie as industrial plants.

Based on data sources, palm sugar has been produced by Indonesia through several regions as in the following table;

Table 1: Map of Gula Semut Aren Production and Processing in Indonesia

NO	PROVINCE	BUSINESS TYPE
1	Aceh	Palm Managing
2	Sumatera Utara	Managing and Palm Sugar
3	Sumatera Barat	Palm Sugar
4	Riau	Coconuts Sugar
5	Lampung	Industries and Coconut Sugar
6	Jambi	Palm Sugar
7	Bengkulu	Palm Sugar and Coconut Sugar
8	Sumatera Selatan	Managing and Palm Sugar
9	Bangka Belitung	Palm Sugar
10	Kalimantan Barat	Palm Sugar and Coconut Sugar
11	Kalimantan Tengah	Palm Sugar
12	Kalimantan Selatan	Palm Sugar
13	Kalimantan Timur	Palm Sugar
14	Banten	Managing Palm Sugar and Coconut Sugar
15	Jawa Barat	Managing Palm Sugar and Coconut Sugar
16	Jawa Tengah	Managing Palm Sugar and Coconut Sugar
17	Jawa Timur	Palm Sugar and Coconut Sugar
18	Bali	Coconut Sugar
19	Nusa Tenggara Barat	Palm Sugar and Coconut Sugar
20	Nusa Tenggara Timur	Managing Palm Sugar
21	Sulawesi Utara	Managing Palm Sugar
22	Gorontalo	Palm Sugar

23	Sulawesi Tengah	Palm Sugar and Coconut Sugar
24	Sulawesi Selatan	Palm Sugar and Coconut Sugar
25	Sulawesi Barat	Palm Sugar and Coconut Sugar
26	Maluku	Palm Sugar
27	Maluku Utara	Palm Sugar
28	Papua	Palm Sugar and Coconut Sugar
29	Papua Barat	Palm Sugar

Sources: WARTA EKSPOR - June Edition 2017- page 9.

Judging from the distribution of Gula Semut Aren production has spread across our country from Aceh to West Papua, meaning that the support of each region spontaneously is very strong even without national agreement between them.

The Supplier countries for benefit of the world market are currently controlled by 11 groups of countries including Indonesia, the 11 countries namely;

Tabele 2: World Market Supplayer Country for Gula Semut Aren 2017 Year.

NO	COUNTRY	VOLUME
1.	China	20%
2.	Netherlands	13,10%
3.	United States	8,70%
4.	France	7,60%
5.	Belgium	24,40%
6.	Ireland	5,90%
7.	Germany	6,90%
8.	Korea Republic	3,90%
9.	Indonesian	3,00%
10	Thailand	2,60%
11.	Other Country	4,0%

Sources: Trade map with Warta June Edition Export 2017

Data map that correlates between demand and supply or market and ant sugar production above show very astonishing results at both the world and Indonesian levels, that there are still huge opportunities for the exploitation of this sector to be developed and improved and at the same time opening up potential markets both for national markets as well as. The fulfillment of this potential market will be realized if the parties involved, both directly and indirectly, have a strong business desire including Small and Medium Micro Businesses. Based on that, the aim of this research is to have a strong interest in uncovering the potential side of Gula Semut Aren as Indonesia's leading commodity in fulfilling world-level sugar products through the meaning of export and import in the next five years.

II. THEORETICAL REVIEW

Palm sugar plants or in Sundanese Kawung language are many and are spread throughout the archipelago, especially in humid hilly areas. Palm trees are trees that produce industrial raw materials, starting with the leaves, the lid, the fibers, the flesh of the tree, the fruit, the sap, the bark and the roots. The population of palm trees and palm trees is decreasing and

increasingly rare. This happens partly because of forest encroachment and felling of palm trees that are not balanced with the regeneration of young palm trees (Murniati and Rofik, 2008). In line with this opinion, although not yet found an accurate figure, almost 90% of the sap or arenas or kawung trees grow naturally. This means that this tree exists because of the blessing of natural services through animals, one of which is mongoose or weasel. Therefore this tree grows unevenly, irregularly and is in a sloping ground position and difficult to reach by humans. The remaining approximately 10% has just been planted by humans intentionally and planned as by farmers, Perhutani and industry. The pattern of planting trees carried out by farmers is very different from the industry. Farmers have never planted these tree seedlings, but have moved from natural seedlings, while the industrial pattern of seeding is then transferring to land that has been prepared regularly. The result is farmers do not produce arena trees with only the number and planned in the land, while the industry is the opposite, for example the pattern of planting sugar palm trees in Hariang, Banten Province. Little awareness of this tree was never known clearly and detected from the recognition of farmers since the decade of the 2000s. The results of the researchers' spawning are in line with the results of research from (Darmawan, 2007) "It has always been traditionally palm sugar grown by the community and become sugar trust. Processed without preservatives and bleach makes palm sugar is very nutritious. But some of them also make intoxicating drinks "

Furthermore some references reveal about this one tree such as in the form of research studies and reference books as follows:

1. Sugar palm is an annual plant species, large, solitary tree shaped up to 12 m high, diameter at breast height (DBH) up to 60 cm (Ramadani et al, 2008). Palm trees can grow to reach a height with a stem diameter of up to 65 cm and a height of 15 m and even reach 20 m with a canopy rising above the stem. Sugar palm plants grow well at an altitude of 500 - 1200 m above sea level.
1. Palm sugar starts to flower, after the plant is 7-10 years old. The flower stalks can be tapped every day, for 2-3 months, producing 10-30 liters of sap every day and can be tapped continuously for 3-9 months. The results of tapping for a minimum range of tapping time is 360 kg / 3 months / inflorescence. Palm sap that is still fresh and tastes sweet can be drunk immediately, or can be left first to experience fermentation before drinking. Fresh palm sap can also be processed to produce sugar, both printed sugar, ant sugar and liquid sugar.
2. Gula Semut Aren or palm sugar is a powdered / crystal version of brown sugar produced by the palm family trees (Arecaceae) (Information Center Agriculture, 2000). Gula Semut Aren is a part of a derived product produced from palm and coconut trees. Naming the Gula Semut Aren because of its shape resembles an anthill on the ground. Gual Semut Aren Ant sugar has more economic value high compared to the printed version of the brown sugar. Some of the advantages of ant sugar are its distinctive scent, long shelf life and moisture content 2-3%, easily dissolved in cold / hot water, practical packaging in pockets and easily combined with other materials in the processing industry food and drink (Mustaufik and Karseno, 2004).
4. The raw material for ant sugar is sap which comes from coconut trees, palm trees and siwalan tree. Palm sap and palm juice are different in terms of things color, scient, taste, and levels of impurities. Palm sugar palm tastes sweeter, more clearer, and fresher, and the amount of solids dissolved in the sap of palm sugar is lower instead of coconut palm juice (Palma Plant Research Institute, 2010).

5. Methodically simple the process of ant sugar is produced in the following order (Look at to Figure 1)

III. RESEARCH METHODS

The field research was carried out on the efforts of traditional palm sugar crafters in Sukamulya Village, Sinaresmi Village, Cisolok Subdistrict, Sukabumi Regency, West Java with UMKM PD Karya Bakti as an institution to store Gula Semut Aren. It should also be noted that the village is included as a traditional cultural preservation preserved by the government, so that including the extinct palm trees can be controlled, this primary data source includes field observations. While the next data source is in the form of a reference study both research results and regular references contained in the reference list.

Data analysis techniques using multiple regression by, 1) Collect data and information from the field and secondary data sources, 2)Comparing the research data and other reference sources according to the needs of the problem statement, and 3)Draw conclusions from data correlations to answer scientific assumptions from the research developed.

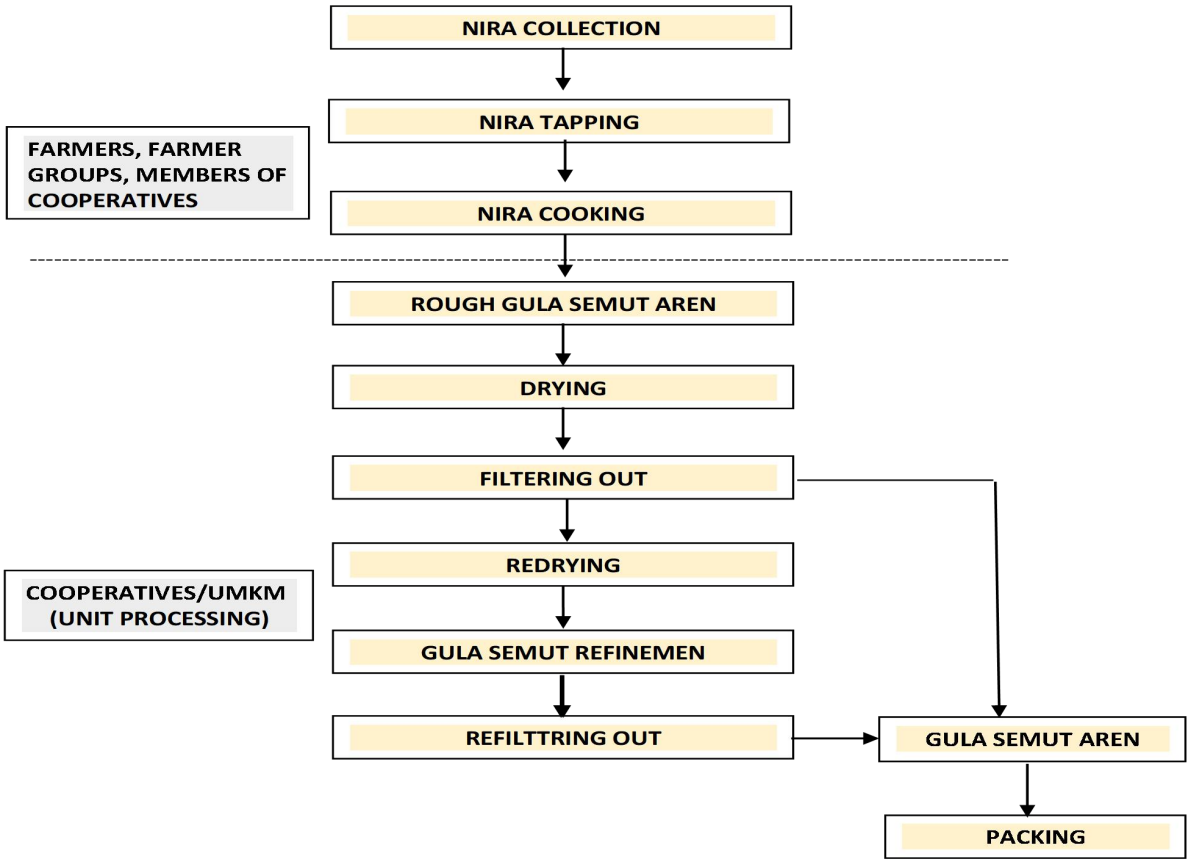

Figure 1: Flow Chart of the Gula Semut Aren
Sources : A Lay and Stevi Karow

IV. RESEARCH RESULTS AND DISCUSSION

The emergence of palm trees that can now be known in accordance with aspects of the benefits to humans is:

Table 3: Benefit of the Palm Tree

NO	ORGAN NAME	PRODUCK	FUNGCTION
1.	The Root	The Root Wine	The Drug Industry
2.	Part of the Midle Leather	Ruyung (bhs sunda)	Home Industry, Weapons and Crafts
3.	Part of the outer leather	Ijuk	Home Industry, Building and Craft Industry
4.	Stem Meat	Sago Flour	Meat Food Industry, Glue Industry.
5.	Young Leaves	Ciagrets Oackage	the Cigarette Industry
6.	Old Leaves Stick	-Sugar Package -Packang Food -**Broom**	Meat Food Industry Home Industry
7.	Flower	Nira	Meat Food Industry
8.	Fruit	Kolangkaling	Food / Beverage Industry
9.	Young middle stem over	Umbut/Young Food	Vegetable Shoots

Palm sugar is a multifunctional type of palm, because all parts of this plant can be utilized, from the 9 benefits above the benefits that are commonly known to the public are; 1) Palm sap, 2) Palm fruit, 3) Palm flour, and 4) Palm fiber. Sugar palm has high economic value because almost all parts of the plant can be utilized by the community. Palm sugar and ant sugar derived from palm sap that is tapped from male flowers is the product of the greatest economic value. The potential of palm sugar is wide open to meet the supply of sugar in the world market. (Source:http://disbun.jabarprov.go.id/bptp/id/post-detail/66/Potensi-Aren-andArenga-innataand-MERRand-di-Jawa-Barat)

Table 4. The area of aren plantations per province in 2012

NO	PROVINSI	LUAS (HA)
1	Jawa barat & Banten	13.878
2	Sulawesi utara	5.928
3	Sumatera utara	4.708
4	Sulawesi selatan	4.520
5	Bengkulu	3.388
6	Jawa tengah	2.638

Sources: Direktorat Jendral Perkebunan 2014

The following is data that shows countries which until now have been importers of ant sugar;

Table 5: World Import Gula Aren Semut 2016 Year

NO	COUNTRY	IMPOR VOLUME
1.	Philippines	21.40%
2.	Germany	13.50%
3.	United States of America	13.00%
4.	Netherlands	9.80%
5.	France	9.60%
6.	United Kingdom	7.60%
7.	Ireland	7.50%
8.	Korea, Republic of	6.10%
9.	Indonesia	6.00%
10.	Singapore	5.50%

Sources: Trade map with Warta June Edition Export 2017

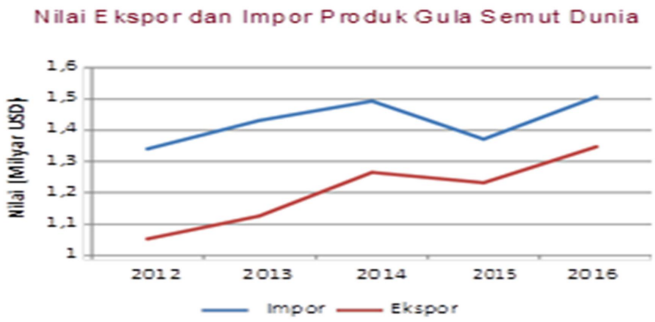

Figure 2: Export and Import Value Gula Semut World Produce

The analysis study is more factual and relevant if conveyed in advance how the market response to this ant sugar. This response can be seen from the large world market demand or often referred to as imports of this world Gula Semut Aren. The world-level import data on Gula Semut Aren appears as follows after being forecast based on data from the comparison of imports with exports, which is 1.96% per year, the average increase in each country is obtained by using the simple equation as follows:

$$\mathbf{Y = a + bx_1 + bx_2 + bx_3 + \ldots bx_{10} + e}$$

Where Y= The World Import Gula Semut Aren Or Export Gula Semut Aren

A= Constanta

B= Import Gula Semut Aren Or Export Gula Semut Aren with Certain Year

X= Increase Trend Value Need Gula Semut Aren One Country

E= epsilon

Table 6: Gula Semut Aren Demend From World Importer Country (%)

NO	COUNTRY OF IMPORT	2016	2017	2018	2019	2020	2021	2021	2022	2023
1.	Philippines	21.40	21.82	22.25	22.68	23.13	23.58	24.04 %	24.51 %	24.99 %
2	Germany	13.50 %	13.76 %	14.03 %	14.31 %	14.59 %	14.88 %	15.17 %	15.46 %	15.77 %
3	U S A	13.00 %	13.25 %	13.51 %	13.78 %	14.05 %	14.32 %	14.61 %	14.89 %	15.18 %
4	Netherlands	9.80 %	9.99 %	10.19 %	10.39 %	10.59 %	10.80 %	11.01 %	11.23 %	11.45 %
5	France	9.60 %	9.79 %	9.98 %	10.18 %	10.38 %	10.58 %	10.79 %	11.00 %	11.21 %
6	UK	7.60 %	7.75 %	7.90 %	8.06 %	8.21 %	8.37 %	8.54 %	8.71 %	8.88 %
7	Ireland	7.50 %	7.65 %	7.80 %	7.95 %	8.11 %	8.26 %	8.43 %	8.59 %	8.76 %
8	Korea, Rep	6.10 %	6.22 %	6.34 %	6.47 %	6.59 %	6.72 %	6.85 %	6.99 %	7.12 %
9	Indonesia	6.00 %	6.12 %	6.24 %	6.36 %	6.48 %	6.61 %	6.74 %	6.87 %	7.01 %
10	Singapore	5.50 %	5.61 %	5.72 %	5.83 %	5.94 %	6.06 %	6.18 %	6.30 %	6.42 %

Based on the table above shows that the trend of the demand for Gula Semut Aren importing countries for the last 5 years up to 2023 shows a fantastic figure for each of the 10 countries. The calculation above estimates of the population of the ten countries is considered given, if it is considered a variable then the number above will be higher developed, because per capita consumption of sugar will increase ants.

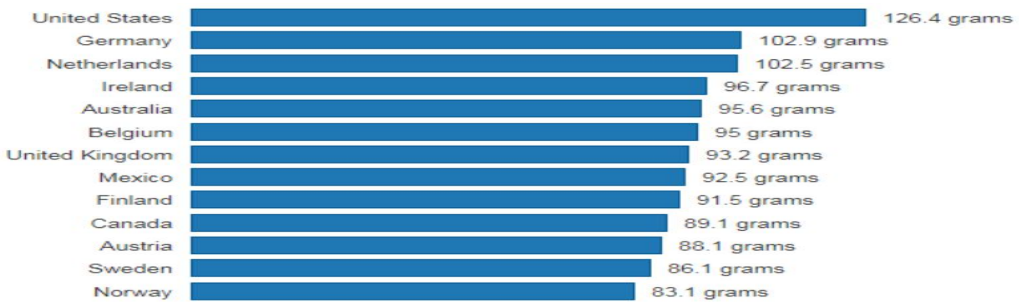

Figure 3: The Twelve Top Sugar Consumers in the World (Per Capita Consumption Per Day)

The needs of the world market for Gula Semut Aren products are met from the ability of each country to export to other countries or the world market. Export data for these products is shown in Table 2 above.

Indonesian currently only contributes 3% to meet the world market of Gula Semut Aren. The remaining 97% is controlled by other countries such as 1) China, 2) the Netherlands, 3) the United States, 4) France, 5) Belgium, 6) Belgium, 7) Ireland, 8) Germany, 9) Korea Republic, 10) Indonesian, 11) Thailand, and 12) Other Country. When viewed from the next 5 years trend, the development of ant sugar seen from the supply of world countries with an average increase of 6% (trad map 2017) will appear as follows.

Table 7: World Gula Semut Aren Export Trends 2017-2025

No	Country Names	2017	2018	2019	2020	2021	2022	2023	2024	2025
1.	China	20%	21.20 %	22.47 %	23.82 %	25.25 %	26.76 %	28.37 %	30.07 %	31.88 %
2.	Netherlands	13,10 %	13.89 %	14.72 %	15.60 %	16.54 %	17.53 %	18.58 %	19.70 %	20.88 %
3.	United States	8,70 %	9.22 %	9.78 %	10.36 %	10.98 %	11.64 %	12.34 %	13.08 %	13.87 %
4.	France	7,60 %	8.06 %	8.54 %	9.05 %	9.59 %	10.17 %	10.78 %	11.43 %	12.11 %
5.	Belgium	24,40 %	25.86 %	27.42 %	29.06 %	30.80 %	32.65 %	34.61 %	36.69 %	38.89 %
6.	Ireland	5,90 %	6.25 %	6.63 %	7.03 %	7.45 %	7.90 %	8.37 %	8.87 %	9.40 %
7.	Germany	6,90 %	7.31 %	7.75 %	8.22 %	8.71 %	9.23 %	9.79 %	10.38 %	11.00 %
8.	Korea Republic	3,90 %	4.13 %	4.38 %	4.64 %	4.92 %	5.22 %	5.53 %	5.86 %	6.22 %
9.	Indonesi	3,00	3.18	3.37	3.57	3.79	4.01	4.26	4.51	4.78

	an	%	%	%	%	%	%	%	%	%
10.	Thailand	2,60 %	2.76 %	2.92 %	3.10 %	3.28 %	3.48 %	3.69 %	3.91 %	4.14 %
11.	Other Country	4,0%	4.24 %	4.49 %	4.76 %	5.05 %	5.35 %	5.67 %	6.01 %	6.38 %

Indonesian for the next 5 years contributed only 4.78% to meet the world market of this Gula Semut Aren the remaining 95.22% was controlled by other countries such as 1) China, 2) the Netherlands, 3) the United States, 4) France, 5) Belgium, 6) Belgium, 7) Ireland, 8) Germany, 9) Korea Republic, 10) Indonesian, 11) Thailand, and 12) Other Country. Thus it can be concluded that Indonesia's potential opportunities are still very large to develop the

Gula Semut Aren market at the world level. This potential is supported by:

1. Percentages of Indonesian market space for this product at 95.22%
2. Indonesia's tropical land area is wider than other countries
3. The human resources of roomie farmers can still be developed
4. Institutional Small And Medium Micro Businesses (UMKM)as the axis of development

of farmers are still passionate for this sector. Specific for the fourth potential factor, namely Micro, Small and Medium Enterprises, or Small And Medium Micro Businesses (UMKM).

V. CONCLUSION

Based on data and analysis results it can be concluded that:

1. Almost all corners of the Indonesian homeland from Aceh to West Papua have and are compatible with the sap or kawung plants that have been traditionally known and worked on by farmers with Small and Medium Micro Businesses (UMKM) business institutions.

2. Organic products are currently gaining popularity. The increase in European markets mainly occurred during 2013-2014 with a value of growth reaching 7.6%. Even in Sweden in 2015, there was an increase of up to 40%. In the case of Gula Semut Aren products, it is relatively easy to obtain an organic certificate because the farming system generally does not use chemicals. In addition to the three issues above, which need to be considered in capturing European market opportunities is the issue of sustainability. In this case it is important to promote products that do not disturb natural forests. Growth in world exports reached an average of 12.60% for world market exports, represented by 11 countries. The highest growth was owned by Belgium by 33.78% and the smallest growth was by Thailand by 3.60% and Indonesia was the second smallest country with an average contribution of 4.15%. While the average import growth for the country was 11.35%, this means that the potential for exports was smaller than imports or 11.35% <12.60%.

3. The 1.25% difference is a wild market figure that can be utilized by Indonesia to meet the world market demand for palm sugar which is at the same time a potential figure that can be utilized. Supporting Indonesia's ability to take advantage of world markets is; 1) The area of Indonesia's tropical land is broader than other countries, 2) The human resource of sap farmers can still be developed, 3) The population of sap can be cultivated in a modern way in

the form of plantations such as in Hariang-Sobang Banten, 4) The Small And Medium Micro Businesses (UMKM) institution as a pivot of farmer developers is still passionate for this sector.

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