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**THE PROSPECT OF SAGO AGROPOLITAN AREA IN WEST MALANGKE  
DISTRICT NORTH LUWU REGENCY**

Sri Hastuty<sup>1</sup>, Dharma Fidyansari<sup>2</sup>, Megawati Idris<sup>3</sup>  
Agribusiness Departement, Faculty of Agriculture, University of Cokroaminoto  
Palopo<sup>1,2,3</sup>  
(srihastuty@uncp.ac.id), (dharmafidyansari@uncp.ac.id<sup>3</sup>),  
([megawatiidris@uncp.ac.id](mailto:megawatiidris@uncp.ac.id)<sup>3</sup>)

**Abstract**

This study aims to know: 1) the supporting factors to establish agropolitan area in District of West Malangke North Luwu Regency; (2) planning of program to form agropolitan area in West Malangke. This research was conducted in District of West Malangke North Luwu Regency. This research carried out qualitative methodology through study literature and data analysis. The data collection technique was performed by several method including interviews, direct observation in the field and data tracking secondary. The sample was collected done with simple random sampling. Data analyzed using descriptive analysis. The research results showed that the supporting factors to establish an agropolitan area in District of West Malangke including: sago as a competitive commodity in West Malangke, local government policy related to agropolitan area, transportation system, economic factors, cultural factors, and institutional agribusiness. As for planning programs to form agropolitan area, including: (1) the concept agropolitan sago socialization, (2) an assessment about the rules or regulations relating to utilizing land for agropolitan area, (3) Study about the need of facilities and infrastructures that supporting the area of agropolitan. (4) The development of the ability farmers in seeding sago (sub-system cultivation), (5) an increase in entrepreneurship the farmers sago (6) an increase capacity of farmers in the postharvest (sub-system agroindustry), (7) an assessment central marketing, (8) institutional assessments agropolitan area.

**Keywords:** *Sago, Agropolitan, West Malangke.*

**Background**

Sago palms are a species of the genus *Metroxylon* belonging to the family *Palmae*. Sago is a type of palm tree that grows in swamps of fresh water. Sago grows in the hot tropical and humid in Southeast Asia (Indonesia, Thailand, Philippines, and Vietnam) and Oceania (Papua New Guinea, Micronesia Islands, and the islands of Oceania). Indonesia has a large wild sago forest > 700,000 ha (Jumantara, 2011). In Indonesia sago grows throughout the island of New Guinea, the islands of Maluku, Kalimantan and Sulawesi in particular Luwu Utara.

A sago tree that ready for harvest can produce between 100 – 600 kg wet sago flour. In terms of nutrition and health is much richer starch (carbohydrates) than rice, but poorer albumin (protein), fat and vitamins, especially A, B, and C. But the shortage of albumin, fats and vitamins can be supplemented by side dishes that accompany the sago dishes.

Sago is the staple food of the men of Maluku, Irian beach and also in Luwu Area particularly North Luwu. Flour of sago is cooked into a kind of pudding similar to kanji called Pugal / Kapurung in Luwu area. Beside Kapurung, flour of sago is printed into a plaque called Dange or made cakes called *bagea* and also *sinole*. There are still many benefits of the sago tree those are from the trunk to sticks - outside the tally. The outside cover of stems the thick is 1 – 1 1/2 cm used as wallboard and ceiling of the house or bail out. Leaf of sago can be made of the roof or container of sago starch. Beside dregs of

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sago starch that has been taken, the starch can be made for the food of livestock. Today land of sago starts were difficult. Slot of sago from a distance like a small points between the expanse of rice fields. Even though, plots of sago became water storage land that very well when dry.

In addition, the sago trees that have been cut down or decomposed will be infested by beetles and beetle larvae that live in the sago tree which has decomposed will be sago worm. The term or name of sago worm different in each area, in Bone, worm sago is commonly referred to as "Dutu", in Palopo known as the "Wati". Sago worm (*Rhynchophorus ferrugineus*) is a food rich of protein. Sago worm obtained from decomposed of sago worm after most of the meat is processed into sago flour. Sago worm can be cooked as dry with a variety of seasoning, made satay, even eaten raw. Raw worm sago taste savory and less flavorful of sago. If bitten, from his stomach will bring out a sweet liquid. However, with the shape of her body, there are still many people who do not want to eat sago worm. Thus, required processing of sago worm as a form of additional function value of sago worm. Sago cultivation development in addition to being food, can be an industrial plants. Sago dregs of quintessence residual can be as material for bio-ethanol for fuel that environmentally friendly. Even in the research found some elements in wood glue and paper, sago as a mixture to obtain quality glue.

Not only as foodstuffs and complementary, sago in the chain of the ecosystem so bring substantial benefits. Overlay of sago become a place of developing various kinds of living creatures such as snakes, beetles, and birds and many other animals. Vegetation of sago provide a quiet "exotic" viewed as a place of the few animals "play besides sago tree is also a favorite place for a stork makes a nest. Sago tree runs out, it will affect ecologically. Sago function also changes land of turf into a solid land in 10 years. From a health side, sago one of the best plant that change the sun photosynthesis energy through the leaves and spread to nature. It helps human around the trees avoid from pulmonary disease and asthma.

Currently the plant cultivation land, more of them have been converted to rice fields and farm. Conservation of sago should be encouraged because sago is a regency symbol of the North Luwu. In North Luwu itself sago is one of the seventh favorite plant from the others various favorite plants. Just to know, the largest growth of sago currently in South Sulawesi, namely in North Luwu, precisely in the District of West Malangke which is about 340 hectares.

Conservation efforts, strengthening the potential and quality results must be supported by proper methods and strengthened with the regulation. One of the appropriate method is through agropolitan concept. With all the potential owned, the prospect of West Malangke be agropolitan sago can be a solution for the sustainable management of sago.

Agropolitan concept emerged from the problems of the existence of regional development gaps between cities as a center of activity and economic growth in rural areas as a center of left behind agricultural activity. All this time the process of interaction of these two regions functionally in a position to weaken each other. Rural areas with the main activities of the primary sector, particularly agriculture, is having problems of stagnant productivity, on the other hand, the urban area as a destination of market and the growth center receiving over urbanization, which raises the discomfort as the effect of environmental and social problems (Pranoto, 2005).

Other view of an agropolitan concept is the concept that was developed as a strategy in rural development. The concept is basically provide urban services in rural areas. Expectations by opening agropolitan region in West Malangke District will have an impact on the agribusiness sector that is expected to develop in a integrated unit from upstream to downstream, supported by the participation of the private sector, governments, communities and other stakeholders, so that in particular can provide

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benefits for farmers in improvement of their living standards and support the economic development of North Luwu broadly, in the District of West Malangke particularly.

### **Problem Statement**

Based on the background above, problem statement in this research is:

1. What factors support the form of the sago agropolitan area in West Malangke of North Luwu Regency?
2. How the program planning to form sago agropolitan area in West Malangke?

### **Purpose of research**

Based of the background above, the purposes of research in this research are:

1. To Know factors support the form of sago agropolitan area in West Malangke of North Luwu Regency
2. To know the program planning to form sago agropolitan area in West Malangke

### **Benefits of the research**

This research is expected can provide benefits such as:

1. As knowledge and information materials for the government in determining policy related to development of agropolitan area in North Luwu, particularly in West Malangke District.
2. As knowledge and information materials for local communities regarding agropolitan sago.
3. Giving knowledge to students and others about sago agropolitan in the West Malangke District of North Luwu.
4. As a research material thus produce something new or disprove the results of research that has been conducted.

### **Method**

This research is a qualitative research to study and analyze generally prospect of sago agropolitan area in the West Malangke District of North Luwu. The Research conducted in December 2016 to February 2017. Determining of the Location conducted purposively, in consideration of the West Malangke District is a centers of sago production based on BPS (2016).

### **Result and Discussion**

#### **General Description**

North Luwu Regency administrative area consist of 12 regions. West Malangke District is one of the districts located in the southern tip of North Luwu, has an area of 214.05 km<sup>2</sup>. The distance from the regency capital that is Masamba - West Malangke is 44 km. Following the border region West Malangke District: (1) The North is bordered by Baebunta District; (2) South is bordered by Bone bay; (3) West is bordered by Luwu Regency; (4) East is bordered by Malangke District. Administratively, the Government of West Malangke oversees 13 villages, where the whole village is a definitive village. Its location directly bordered by Bone bay makes this district has four villages including the beach village category, namely Pombakka, Waelawi, Pengkajoang, and Pao. High territory above sea level (DPL) is 23 altitude.

Demographically, West Malangke when compared with other districts, population density in West Malangke classified as high. With the area is 214.05 km<sup>2</sup> and population is 24 315 people, the number of households is 5395 RT, the population density in these districts as many as 114 people / km<sup>2</sup>. By other words, each area in the West Malangke on average inhabited by 114 people or the percentage of the population is

7.97%. In the same year, 2015, the number of male population as much as 12 094 people and the number of female population 12 041 people. Thus, the sex ratio is 100, which means that from every 100 female residents there are 100 males (BPS North Luwu, 2016)

### **Social Conditions**

Educational facilities in the West Malangke relatively complete from kindergarten to high school level of education. Education facilities of kindergarten as 18 units, elementary education facilities as 24 units spread in almost every village, except in the Polejiwa village. For junior high school education level, there are 11 units, located in the Pengkajoang, Pao, Cenning, Wara, and Baku-baku village. Senior high school education facilities as 3 units.

West Malangke health facilities consist of: health center 6 pieces, integrated health pass 27 pieces, village health post 8 pieces. Worship facilities consist of: Mosque 60 pieces, musholla 11 pieces, church 15 pieces, the Catholic Church 1 piece.

Most homes in the West Malangke not permanent. There are 3,945 homes are not permanent and only 713 instead home is permanent, they also do not have a garbage dump. There are many families who do not have toilet as a place to defecate. In addition, there are also still many villages that do not have sewer.

### **Supporting Factors Establishing Agropolitan Area in West Malangke of North Luwu**

The main characteristics of Agropolitan concept which includes an integrated development with the involvement of a complete support system physically as well as institutionally and using of local resources are optimized, and integrating agriculture and non-agriculture, mainly activity based resource and development centers on local services as a general part of activity both regionally and development of urban centers (Buang et al, 2011).

Nasution (1998) in (Iqbal and Iwan, 2009), describe the characteristics of agropolitan based on five criterias as follow :

1. Agropolitan includes the small to medium sized of city (the most populous area of 600 thousand inhabitants with a maximum area of 30 thousand hectares)
2. Agropolitan has a rear area / countryside (hinterland) leading commodity producer or main and several supporting commodities which further developed based on the concept of zoning commodities
3. Agropolitan has a core area / urban industrial centers where he built the processing of commodities produced by rural areas whose development is adapted to the natural conditions of production of competitive commodities
4. Agropolitan have a growth center should be able to obtain economic benefits for the company's internal and external benefits as well as providing for the development of agroindustry as a whole
5. Agropolitan encourages rural areas to establish business units optimally through policy incentives rational economic system.

Agricultural town (Agropolitan) is within the supplier of agricultural products (agricultural production centers) in which the area contributed greatly to the livelihood and welfare of the people. Furthermore agricultural region (including the city) is called with the agropolitan. Agricultural town can be a medium-sized city or a small city or a city district or a rural city that serves as the center of economic growth is boosting the development of rural areas and villages of the hinterland or surrounding area through economic development, which is not limited as center of the agricultural sector, but also the development widely sectors such as farming (on farm and off farm), small industries, tourism, services, and others.

Here are the factors that support the form of the agropolitan area in West Malangke North Luwu:

### ***1. Superior Commodities***

West Malangke District is the largest sago-producing of North Luwu Regency, South Sulawesi. Based on data from the Department of Forestry Plantation and North Luwu (2015 in BPS, 2016) sago plantation area in West Malangke reached 1061.95 Ha. And production reached 669 tons of sago flour in 2015. Sago palm in West Malangke consists of immature 722 hectares and 340 hectares of palms yield. Total production of flour sago in North Luwu in 2015 reached 1,388 tons. This means that half of the total production comes from West Malangke.

Supporting commodity among others: Cocoa 1140.80 Ha (939.20 tons); Coconut 119.25 hectares (127.20 tons); Palm Oil 77.80 Ha (9479.13 tonnes); Aren 12.85 hectares (125.91 tons); Pepper 11 ha (3.31 tons); Fields consist of two types are 312 Ha irrigation, non-irrigated 708 hectares or a total of 1020 hectares (5707.03 tonnes).

### ***2. Local Government Policy Related to Agropolitan Area***

North Luwu government efforts to support the establishment of agropolitan reflected in some of the policies are summarized below:

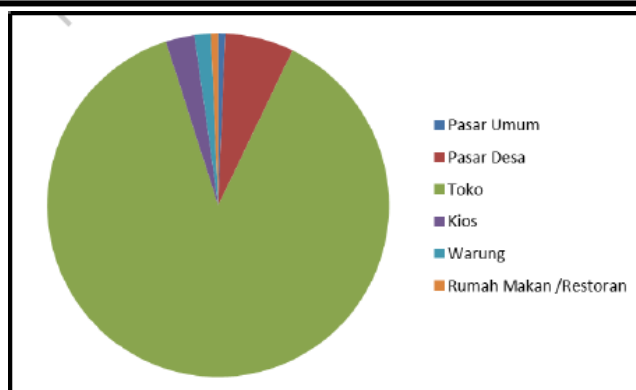
- a. According to Law No. 26 Year 2007, agropolitan area is an area consisting of one or more centers in rural areas as agricultural production systems and management of certain natural resources indicated by their functional and hierarchical spatial linkages settlement system unit and agribusiness systems.
- b. Spatial regulation of North Luwu regency, aims to realize the district-based agro and marine with attention to environmental aspects and aspects of disaster for the creation of public welfare of North Luwu.
- c. Policy development patterns of the room, one of which includes the development control policy farming activities to avoid exceeding the carrying capacity and environmental capacity with one of our stated strategy is to develop agropolitan, agro-industry and minapolitan the production centers of excellence.

### ***3. Transportation System***

Major infrastructure systems that support a transportation system consists of:

- a. Landline network transport system, consisting of: (1). Periodic routine maintenance and rehabilitation of roads in the current criteria adapted to the level of damage; (2) The opening of the new road to connect between the region and the efforts of the allotment of development; (3) arrangement and increase primary collector road network spread across the district; and (4) development of the outer ring road, as well as open up new access road to the interests and potentials.
- b. Marine transportation system, consisting of: (1) marine transport network system covers, gully crossings public harbor in Malangke district and West Malangke; (2) The development plan includes the marine transportation system to develop pedestrian pier port planned port munte people in Bone Bone District.
- c. Air transportation system that is closest to that area location that is Andi Djemma Masamba Airport in Masamba District.

### ***4. Economic Factor***



Picture 1. Diagram Total of Trading Facilities According to Types Registered in Koperindag and BPPTSPM in North Luwu District

Table 1. Total Companies Listed in Koperindag and BPPTSPM According to Body of Law in North Luwu Regency, 2011-2015

Body of Law	2011	2012	2013	2014	2015
PT/NV	21	18	31	21	33
CV/Firma	155	155	113	139	127
Koperasi	33	22	16	173	254
Personal	631	385	525	385	599
Others	25	15	7	11	66
<b>Total</b>	<b>865</b>	<b>595</b>	<b>692</b>	<b>729</b>	<b>1079</b>

Source: Department of Koperindag & BPPTSPM (2017)

Marketing of agricultural / farm result to support the marketing system is to shorten the chain of commerce trade system. Starting from the production center to the end of the marketing centers (outlet). Marketing agencies that participate are individual Company (Merchants), Limited Liability Company (PT), CV and cooperatives, both cooperatives and non-cooperatives, which is expected to support economic activity of the population.

Table 2. Total Facilities of Trading Registered in Koperindag and BPPTSPM According to Body of Law in North Luwu, 2011-2015

Body of Law	2011	2012	2013	2014	2015
General Market	3	4	3	4	4
Village Market		34	67	35	38
Shop	276	314	274	140	515
Stall	44	20	8	75	16
Small Shop	23	3	3	1	9
Restaurant			3	2	4
<b>Total</b>	<b>865</b>	<b>595</b>	<b>692</b>	<b>729</b>	<b>1079</b>

Source: Department of Koperindag & BPPTSPM (2017)

The trade sector in North Luwu increased, based on table 2 above, the development from 2011 to 2015 experiencing good growth. Although in 2014 the number of markets, shops and restaurants has decreased drastically, but in 2015 the state was recovering.

### 5. Cultural Factor

In general, people in the West Malangke oftenly consume sago, sago as their staple food made the second after rice. People in the West Malangke utilize sago become

one of the basic foodstuffs commonly called Kapurung, besides Kapurung People also use sago cake bagea, sinole, dange, lanyu 'and there are many ways to process sago. The reason for the public to consume sago because it tastes good and it is customary for generations (already entrenched).

#### **6. Institutional Agribusiness**

The concept of "Agropolitan" is a concept that was developed as a strategy in rural development. The concept is basically provide urban services in rural areas or known as the "city in the field". Center services are provided either in the form of services agricultural cultivation techniques, working capital and market information so as to reduce production costs and marketing costs.

#### **Programs Establishing Sago Agropolitan Area in West Malangke**

Efforts of establishing Sago Agropolitan Area requires initial steps of planning programs in efforts to establish Sago Agropolitan Area. As for programs that could be done as early rare are:

##### **1. Socialization of Sago Agropolitan Concept.**

The initial step in the efforts of opening agropolitan area in West Malangke, namely to socialization to the public, is intended to equalize and unify the perception, assessment, understanding, and steps in developing agropolitan. Socialization is important as a first step for the agropolitan development involves many parties and many interests, so the goal of socialization is the local government, private, and community / group of farmers, especially those in area. The society is given an understanding of the positive impact of the establishing agropolitan.

##### **2. Study about Rules or Regulations Relating to Use of Agropolitan Area Land**

To form agropolitan area there should be binding rules so that it can support the formation of the agropolitan and create sustainable food agricultural land. Functionally law plays a role in macro and micro. Moreover, the law has another function, namely as a social engineering. This situation is related to the used of law as one of the solutions or the means adopted to manipulate a situation that might threaten the resilience, independence and sovereignty toward a condition conducive for the protection of agricultural land sustainable food. Today, the issue threatened the existence of sago getting warmer with increasing land conversion plant to plant sago considered productive, such as rice paddies, palm oil, and cocoa.

In carrying out this function of social engineering, law was perceived to have the power to be able to change things. State to be changed it must start from adverse conditions leading to a better direction. Here are some related laws:

- a. Article 33 Paragraph 3 of the 1945 Constitution, which regulates Understanding the Economy, utilization of natural resources, and the Principle of National Economy, reads that "earth and water and natural resources contained in it are controlled by the State and used for the greatest prosperity of the people." Under the provisions of Article 33 paragraph (3), for food agricultural land is one part of the earth as a gift of God Almighty which is controlled by the state and used for the greater prosperity of the people.
- b. Indonesian Government Regulation No. 15 Year 2010 on the Implementation of Spatial Planning. The section regarding respect of development Preparation and Determination Plan of Village Area is complete detailed in article 71 to article 80.
- c. Law Number 26 Year 2007 on Spatial Planning (State Gazette of 2007 Number 68, Additional State Gazette No. 4725).
- d. Indonesian Government Regulation No. 26 Year 2008 on the National Spatial Plan.

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- e. Law No. 24 of 1992 on the arrangement of space which among others states that the arrangement of space by function area and aspects of activities that include rural areas, urban areas and regions.

**3. Study About The Need of Facilities and Infrastructure Supporting Agropolitan Area**

Facilities is the main condition that must be present in the form of the agropolitan. According Wibowo (2004), the requirements of the area can be developed into an agropolitan is to have infrastructure agribusiness adequate (market, financial institutions, institutional farmers, hall extension integrated, accessibility, and agricultural inputs), as well as public facilities and infrastructure are adequate (transport, electricity, water). As for the facilities and infrastructure necessary for the agropolitan among others and develop those needs into development programs, namely: (a) infrastructure and facilities to support sub-system of agribusiness upstream (up stream agribusiness) for the smooth flow of goods coming from the city to the agropolitan area form of road connections between rural and urban, warehouse storage saprotan (agricultural inputs) and the unloading saprotan; (b) infrastructure and facilities to support sub-system farm / agricultural primary (on-farm agribusiness) to increase the cultivation of sago in the form of: farming effort ways from center village to the hinterland village and inter-village hinterland that supplies of plantation, sub- collector terminal to villages in the hinterland; (C) infrastructure and facilities to support sub-system downstream agribusiness in the form of agricultural product processing industry before it is marketed in the form of: Facilities drying of agricultural / farming, storage warehouse of agricultural / farming, including the facilities of agricultural processing, terminal, courtyard park, as well as loading and unloading. Supporting facilities such as power, telephone, water and sewage.

**4. Development of Farmer Ability in Seeding Sago (Sub System of Conservation)**

The increase in non-rice food production are the demands (diversification), one of the non-rice commodities that need to be developed is sago, as a new food source and the source of people's welfare. Sago development is already urgent and can not be postponed anymore, but on the other hand are also faced with various problems, both technical and social aspects and institutional. Sago plantation in order to obtain maximum productivity in a sustainable manner, the pattern of exploitation of sago which is still in the category 'sago forests' natural needs to be directed into the garden cultivation patterns (real) sago.

The first step that can be done is to improve the number, distribution, and age composition, population sago plants through a settlement activities sago plantation society, of course, without prejudice to the quality of sago. The first step can be realized by improving the ability of farmers in developing quality seeds in this case sago seeds, because the seeds will determine the production, good seed will determine the quality of products of sago. The following activities as capacity building effort sago farmers: (1) Make a pilot and mentoring cultivation of sago through the expansion and restructuring gardens, (2) Empowering Regional Facilitator for the facilitation of empowerment of farmers, (3) Increase of farmer empowerment through empowerment training, (4) make the initiation and development assistance sago processing at farm level; (5) Preparatory Processing and Utilization of Remote Sensing Data to support the development of Sagu (Technical Guidance of Sago).

**5. Improvement of Entrepreneurs Spirit to Sago Farmer**

Sago farmers as actors mayaoritas farming did not dare to take risks for businesses, because the market can not and do not yet have extensive market network. Therefore it is necessary to encourage the entrepreneurial spirit in view of the prospect of non-rice foods are starting to bloom as a form of diversification.



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There are 24 indicators of entrepreneurial spirit, ie In themselves, Optimistic, Leadership, Can manage money, Imagination, Can plan, Patience, Resolute, Courage, Responsibility, Work Hard, Encouragement Achieve Something, Integrity, Confidence, Realism, Organization, Accuracy , Tranquility, Taking into account the risks, physical health, communication with others, freedom, could hang out, and Able to make decisions. Thus Entrepreneurial an entrepreneur, is a person or group of people who organize the factors of production: natural, labor, capital and skills for the purpose of production (Alma, 2009 in Muljaningsih, et al., 2013)

**6. *Improvement of Farmer Ability in Activity Postharvest (sub System Agroindustry)***

Farmers provide the ability to process various types of processed sago, among others; bagea, sago crackers, noodles sago, sago flour, dange and others. For the processing of sago, needs to be supported by facilities / machinery so that the processing can be carried out effectively and efisien. Other sago processing capabilities, farmers are also equipped with packaging techniques and product labeling. For agribusiness activities in the upstream sub-system farmers will be fostered by the department of trade and industry.

**7. *Research Center of Marketing***

Marketing center study was conducted to improve the ability of farmers in dealing with various conditions in a highly developed today. The involvement of the private sector / industry, the market, as well as higher education is indispensable significantly to provide more insight into the wider while opening opportunities for cooperation in the development of marketing network sago. For marketing activities should be performed partnership with cooperatives, SMEs, shops / supermarkets and other marketing agencies.

**8. *Study of Agropolitan Area Institutional.***

Institutional development is conducted in order to create synergy between existing support institutions. During this time weak ability of these institutions in improving skills and providing services to farmers. To support the synergy among institutions supporting the need for inter-institutional agreements supporting memorandum, in order to clear the synchronization of tasks and each institution. The concept of institutional pengembangan farmers will focus on empowering farmers organizations in order to become an institution that is active and efficient for farmers and entrepreneurs developing economies in the agropolitan. The concept of mentoring and counseling to more intensive time duration required to improve the performance of institutions and businesses farmer economy. Other institutional development that can be done include: the development of cooperatives, to increase the competence of extension agencies, the development group of medium-sized enterprises, strengthening of partnerships and the role of stakeholders.

**Conclusion**

The factors supporting the form of sago agropolitan area in West Malangke District, among others: (1) Superior Commodities (2) Local government policy related to area of agropolitan, (3) Transportation system, (4) Economic factors, (5) Cultural factors, and ( 6) Institutional agribusiness.

Planning programs to establish sago agropolitan area, among others: (1) Socialization of sago agropolitan concept, (2) Study of the rules or regulations relating to use of agropolitan land area, (3) Study about the needs of infrastructure and facilities and arrange the need being programs of development, (4) Development of Farmer ability in seeding sago (Sub systems of conservation), (5) Improvement of Entrepreneur spirit to

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sago farmer (6) Improvement of Farmer Ability in Activities of Postharvest (Sub systems agroindustry), (7) Research Centre of Marketing , (8) Study of agropolitan institutional.

#### **Suggestion**

The active role of Local Government in formulating and implementing the Sago Agropolitan area in west Malangke needs to be realized. Additionally, it is recommended to undertake further research related to factors that favor the formation of sago agropolitan area and several studies into programs in efforts to establish the region.

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