

Integrated Agricultural Development based on Local Resources in Gunungkidul Regency, DIY, Indonesia

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Abstract

Agricultural development is not only development in cash crop but also agricultural integrated development, and it is possible to integrate agriculture and tourism in Gunungkidul Regency, Daerah Istimewa Yogyakarta Province. Many sectors are needed to implement the integrated agricultural development, especially for sustainability agricultural integrated system. This research is aimed to know resources that support the sustainability agricultural integrated system and potential local resources development. The research is undertaken in GunungKidul Regency, Daerah Istimewa Yogyakarta Province by potency consideration of local resources which is recognized as agricultural area with tourism potential to develop area. Qualitative method is used in analyzing respondents's opinion gathered by interview and FGDs. Data was analyzed by nonparametric analysis, and SWOT analysis. Research result shows that perception of young farmer and motivation of farmer to support the sustainability integrated agricultural development is high. Another supporting resource of the integrated farming is household income. The combination for integrated agricultural development, that is implemented, are animal – vegetable, animal – cash crop, and animal – annual crop. Local food is potential for increasing household income through tourism and direct marketing. Many local foods are from agricultural products, such as rice, fruits, vegetables, cassava, soybeans, etc.

Keywords: agriculture, integrated, sustainability, local food

Introduction

The recent agricultural development implementation is not just focus on the development of food crops but it has already integrated with some fields of agriculture in a broad sense, such as fisheries, agriculture, forestry, livestock, plantation, agricultural industry, and environmental consideration. This form of development is known as an integrated agricultural development system. Integrated agricultural development system is an agricultural system that integrates various types of farming business in a broad sense by paying attention to environmental aspects such as livestock and crop production or fish and livestock. An integrated farming system ensures that

waste resulted from an agricultural sector becomes a resource for other agricultural fields. Utilization of waste as a resource not only eliminates unimportant materials but also ensures an overall increase in productivity (Soni *et al.*, 2014). The existence of integrated agricultural system is expected to reach a sustainable agriculture that can prosper farmers and their families continuously.

The term of integrated farming system according to Notohadiprawiro is a sustainable agriculture activity as an integrated agricultural management system that gradually increases the income of each unit of land while maintaining the integrity, ecological diversity and biodiversity of

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existing natural resources in the long run, providing economic benefits for everyone, contributing to improve the quality of life, and strengthening the economic development of the state (Ningsih and Sofyan, 2015).

Implementation and sustainability of integrated agricultural development system is determined by local resources availability. Local resources owned by a region such as agricultural commodities, fisheries, livestock, forestry, and plantations. One that can be developed is local food. According to the Food Security Agency (2012), local food is anything coming from biological sources and water, whether be processed or not, earmarked as food or drink for human consumption including food additives, foodstuffs, and other materials used in the process preparation, processing or manufacture of food and beverages. Around us there are various crops that are used as food for daily needs. Around 7,000 plant species are used as food worldwide, but have declined by about 30% over the last decade as most of the world's population consumes corn, wheat and rice as a source of energy and protein (Bioversity International, 2009, Nunes and Nijkamp, 2008, FAOSTAT, 2010). Local food becomes a supporting commodity from

several sectors such as livestock, industry, and even tourism that local food can support a tourism of a region.

Gunungkidul Regency, as one of the agrarian regency in DIY, also implements integrated agricultural development by utilizing its local resource potentials. Integration of livestock-agriculture for food crops, one of which is implemented in Nglanggeran, Patuk Sub-district, GunungKidul Regency, is one of the developed sample. On the other hand, Gunungkidul Regency has a very high tourism potential from upland tour to the dazzling sea. The physical condition and development of tourism allow the synergy of agriculture and tourism can be realized. Integration of food crops-tourism can also be developed with the availability of diversified local food in Gunungkidul which can support the increase in family income and optimize role of local food in support of tourism.

Regarding the above description, the research aims to determine the resources that can support the sustainability of integrated agricultural systems and the development of local resource potentials to support the sustainability of integrated agricultural systems in Gunungkidul Regency.

Literature Review

Farming system, according to Swandi cit. Ginting, (2013) is a stable, unique and feasible farming arrangement managed according to the practices outlined in the physical, biological and socio-economic environment according to the objectives, preferences and resources of a household. Furthermore, Ginting stated that integrated farming system is one of commodity diversification activities that can be done to offset the need for agricultural products

(especially food crops) which continuously increase through the utilization of synergistic relationships among cultivated commodities, without having to damage the environment as well high labor absorption. Implementation of integrated farming system is the right choice in an effort to increase farmer income and at the same time utilize agricultural resources optimally. According to Suksri *et al.* (2008) integrated agriculture is an agricultural system that

seeks at least two different types of agricultural sub-sectors, such as growing rice and raising fish, or raising cattle and vegetable plantations. Running various agricultural activities at the same time helps reduce costs. For example, manure and other agricultural residues can be used as fertilizer when planting crops. This system is suitable for small-scale farmers having small field. Furthermore, an integrated agriculture is a farm that is able to maintain the balance of the ecosystem in it so that the flow of nutrients and energy occurs in a balanced manner. This balance will produce high productivity and sustainability effectively and efficiently (Reijntjes et al., 1992).

An integrated agricultural system is an agricultural system combining livestock, aquaculture, agriculture and agro-industry widely with a symbiotic or synergistic system, so that waste coming from an agricultural process becomes input to another sectors, with or without treatment to provide production facilities, such as energy, fertilizer, and feed for optimal productivity at minimum cost. Concepts related to integrated agriculture are practiced by many farmers around the world. A common characteristic of this system is a combination of crop and livestock and in some implementations may include a combination of fisheries and trees. It is a component of an agricultural system collecting the concept of taking into account small risks, increasing total production and profits by lowering external input through recycling and increasing the utilization of organic and plant waste residues (CARDI, 2010).

Based on the above definition of integrated agricultural system, it can be concluded that integrated farming system is a farming system combining at least two agriculture sub-sectors such as livestock, fishery,

forestry and agriculture to reduce the cost or means of production and obtain maximum income. In Indonesia, especially in rural areas, many farmers have implemented this system to support household income and as an investment if crop production fails to harvest.

The word integrated comes from the Latin verb "Integration" which means to make the whole, to finish with the addition of parts, or to combine parts into whole. Plants, livestock and fish subsystems can function independently within a particular farming system, and its products are just as additions. However, the output of a subsystem in an integrated agricultural system that may otherwise have been wasted into inputs for other subsystems results in greater efficiency of the desired product output from the area / groundwater under the control of a farmer. There is synergism in integrated agriculture from the cooperation of the subsystem and it has greater total impact than the sum of its respective effects (Edwards, 1988).

According to Nurcholis and Supangkat (2011), integrated farming system has the principle of integration (integrity) that must be noticed, namely:

- a. Highly diversified agroecosystems that provide higher assurance for farmers in a sustainable way
- b. It takes functional diversity that can be achieved by combining plant and animal species which has complementary properties in a positive and synergetic interaction, not just an improved stability but also a lower productivity of agricultural systems
- c. In implementing sustainable agriculture, it is necessary to support human resources, knowledge and technology, capital, product and consumer relations, as well as issues of

- agricultural mission balance in development
- d. Utilization of functional diversity to the maximum level resulting in a complex and integrated agricultural system that uses existing resources and inputs optimally
 - e. Determine the combination of plants, animals and inputs leading to high productivity, production security and resource conservation that is relatively in line with limited land, labor and capital.

The main objective of integrated farming system according to Jaishankar *et al.* (2014) is to maintain the production capacity of food, other goods and services that contribute to food security, and generate income for poor rural communities. Other functions of this system that are equally important are the achievement of environmental sustainability, preserving the ecosystem and contributing to creating sustainable agriculture. This suggests that integrated farming systems have components that incorporate multifunctional concepts, which means that the farming system is believed to perform four major functions in the society of food security, environment, economy and social functions. Meanwhile Manjunatha *et al.* (2014), suggests that there are four main objectives of an integrated agricultural system:

- a. Maximizing production output from all farming components to provide a steady and stable income.
- b. Rejuvenating or improving of production system and achieve agro-ecological balance.
- c. Avoiding the accumulation and increase population of plant pest organisms (pests, diseases and weeds) through natural planting systems.

- d. Reducing the use of chemicals to provide the community healthy products and environment-free chemicals.

The advantages that can be obtained from integrated farming system according to Manjunatha *et al.* (2014), as follows:

- a. Higher food production to meet the demand from a rapidly growing population
- b. Increased farmers' income through recycling residual appropriately and sustainable soil fertility integration components and productivity through recycling organic waste
- c. Integration of synergic activities will result in the availability of nutritious foods enriched with proteins, carbohydrates, fats, minerals and vitamins
- d. Integrated farming will assist in environmental protection through the effective waste recycling from livestock raising activities such as pig pens, poultry and raising for pigeons
- e. Reducing production costs through recycled inputs from byproducts from allied companies
- f. Regular stable income through products such as eggs, milk, mushrooms, vegetables, honey and cocoons from related activities on integrated agriculture
- g. The inclusion of biogas & agro-forestry in integrated farming systems will solve the prognosticated energy crisis
- h. The cultivation of animal feed crops as intercropping and cropping of the border will result in the availability of adequate nutritious feed for animal components such as dairy cows, goats / sheep, pigs and rabbits

- i. Firewood and construction timber requirements can be fulfilled from agroforestry systems without affecting natural forests
- j. Avoiding land losses caused by erosion through implementing agro-forestry and proper cultivation of any part of the soil by integrated agriculture
- k. Regular employment creation for farm family members from small and marginal farmers.

Based on the research it can be seen that integrated farming system enables sustainable, profitable, productive and 95% of self-system nutrition is sustainable through recycling resource (Manjunatha *et al.*, 2013). Agricultural systems run in a farm have opportunities to develop in tidal areas in different regions and integrated farming is feasible to develop, regarding the evidence that the value of investment indicate a positive and non-deficit cash value (Massinai *et al.*, 2014). In another research it is said that the development of integrated farming system at the farm level is quite large indicated by the diversity of farming system applied by farmers in the field. However, the system of integration has not been well implemented, so farmers' income is relatively low (Hoesen *et al.*, 2014).

The implementation of traditional integrated farming has actually been done by farmers in the past in a simple way. In modern,

integrated agriculture is also pursued by the government to be adopted by farmers. Ministry of Agriculture through Indonesian Agency for Agricultural Research and Development was tasked to build five Agricultural Science Parks (TSP) in Experimental Garden area of IAARD and 16 Agricultural Technology Parks (TTP) in district/city level. Agricultural Technology Park is one of the innovations of BPTP (Assessment Institute For Agricultural Technology / AIAT) which aims to exploit the potential of local farmers in utilizing integrated farming system.

The combination of food and tourism certainly brings consequences that are not simple. The habit of interpreting food is only as a home commodity and only solely to meet the needs of the body is not enough anymore. Meaning of food should have moved to "sell" area, especially in tourism places. In practice it is not easy to invite people to move in that direction. One example is in West Lombok Regency. The local food and tourism potentials are varied, but the utilization is still less than optimal. Diversification of food products has been done and will be developed rapidly with the commitment of members of UMKM (Micro, Small and Medium Enterprises / MSME). In reality many agencies are involved in local food activities but still work sectorally (Wastutiningsih and dan Untari, 2016).

Research Methods

The research of integrated agricultural system is a descriptive research. According to Morissan (2015), descriptive research shows the researcher's efforts in explaining and recording conditions or attitudes to explain what is at present. The approach

taken in this research was qualitative approach.

The data in this research was collected in several ways, namely (1) Observation is a technique of data collection through direct observation of the object of research. (2) Interviews are data collection conducted by

communicating directly with respondents to know things related to the research by using questionnaires or questionnaires that have been prepared previously. (3) Recording technique which is data collection technique by recording the needed data or related to the research in related institution. (4) Literature study is data collection techniques to collect secondary data by way of reviewing books and journals related to research. (5) Focus group discussion to further explore the necessary data collectively and simultaneously check and clarify the obtained data.

The research was conducted in two villages in Gunungkidul Regency, Nglanggeran Village in Patuk Sub-district and Bejiharjo Village in Karangmojo Sub-district. Research held in Nglanggeran Village was focused on how people's perception and motivation in the process of integrated agricultural development, while in Bejiharjo village was concentrated on the role of natural resources in supporting the process of agricultural development.

The obtained data was analyzed by nonparametric analysis in the form of cross tabulation and SWOT analysis to find the required development strategy.

Research Findings and Discussion

Integrated agricultural development is a concept viewing sector-based development but development is a complete concept that is interconnected with one another. The existing resources, both human and natural resources, are managed under the principle of integrity. Therefore, the availability of resources becomes an important thing to be managed properly so that development can take place optimally.

The natural resource that can be made combination for agricultural integrated system in Gunungkidul are animal – vegetable, animal – cash crop, and animal – annual crop. The farmers make this combination for optimizing their resource and increasing the household income. They also think that they can risk management for failure of production.

One of the resources that must be managed properly is human resources. Human resources in Gunungkidul consist of children, youth, and the community at large. In this study because children have not been able to contribute much, so the focus of research on youth and society in general.

A person's actions may be influenced by his perceptions and motivations. Therefore, the study emphasized on the perception of youth and community motivation in responding to various integrated agricultural development programs. When the perception and motivation of the community and the role of natural resources can be well known, it is expected that agricultural development can run optimally, effectively and efficiently. On the other hand, the implementation of integrated agricultural development can also be seen from the perspective of local resources, one of which is about local food.

A. Youth Perception Towards Integrated Farming System in Nglanggeran Village, Patuk Sub-district, Gunungkidul Regency

Youth in agricultural development are often abandoned even though youth are the next generation of the nation. It should be important for agriculture in the future. A good perception of agriculture is expected to make the youth have a strong desire to continue the existing agricultural business. Youth perception of agriculture becomes

very important to know because it will greatly affect the sustainability of agriculture itself.

Youth perceptions are measured through four indicators: economic value, youth

participation, environmental conditions, and prestige, then re-elaborated into several closed question items for each indicator.

From interviews with youth the following results are obtained:

Table 1 Distribution of the Level of Youth Perception

No	Indicator	Score Interval	Average Score	Level of Perception (%)
A. Economic Value				
1	Agricultural activities can ensure a decent life	0-4	3,64	91,02
2	Farming activities are useful in meeting economic needs	0-4	3,72	92,97
3	The yield of agricultural products has a high selling value	0-4	3,53	88,28
4	Integrated farming can provide greater benefits	0-4	3,80	94,92
5	Integrated farming depresses large capital for large profits	0-4	3,67	91,80
6	Running an integrated farm can save your family's daily food needs	0-4	3,80	94,92
7	Integrating farming can help reduce family expenditure when the price of expensive commodities is on the market	0-4	3,78	94,53
8	Integrated agriculture allows farmers to earn income from selling agricultural products	0-4	3,80	94,92
Total A		0-32	29,74	-
Average A		-	-	92,92
B. Youth Participation				
1	Helping parents or relatives to cultivate land	0-1	0,61	60,94
2	Supporting parents or relatives to harvest crops during the harvest season	0-1	0,7	70,31
3	Aiding to cultivate the produce and sell the product	0-1	0,66	65,63
4	Helping to find grass for parent's livestock feed	0-1	0,53	53,13
5	Taking care for shepherd farm animals belong to parents	0-1	0,41	40,63
6	Caring for parent's cattle	0-1	0,64	64,06
7	Contributing ideas for agricultural development in the village	0-1	0,34	34,38
8	Solving problems about agriculture and livestock	0-1	0,36	35,94
Total B		8	4,25	-
Average B		-	-	53,13

Table 1 (Contd.)

No	Indicator	Score Interval	Average Score	Level of Perception (%)
C. Environmental Conditions				
1	Integrated agricultural activities in the village make the environment beautiful and harmony	0-4	3,94	98,44
2	Integrated agricultural activities in the village make the environment clean	0-4	3,84	96,09
3	Integrated agricultural activities in the village make the air cool and clean	0-4	3,81	95,31
4	Integrated agricultural activities in the village can maintain the preservation of environment	0-4	3,91	97,66
5	Integrated agricultural activities in the village can keep the soil fertile in order to remain productive	0-4	3,88	96,88
6	Integrated agricultural activities in the village can damage ecosystems in agricultural areas	0-4	3,78	94,53
7	Integrated agricultural activities in the village lead to global warming	0-4	3,78	94,53
8	Integrated agricultural activities in the village can damage the environment	0-4	3,69	92,12
9	Integrated agricultural activities generate hazardous waste / residues for environment	0-4	3,77	94,14
10	Integrated agricultural activities in the village can pollute clean water	0-4	3,73	93,36
Total C		0-40	38,13	-
Average C		-	-	95,31
D. Prestige				
1	The pride of the youth living in the village since it can breathe fresh air everyday	0-4	3,48	87,11
2	The pride of the youth living in the village as it is away from the noise	0-4	3,31	82,81
3	The pride of the youth living in the village because they can contribute directly to develop the village potential	0-4	3,73	93,36
4	The pride of the youth living in the village for it can support to integrated agricultural activities	0-4	3,67	91,80
5	The pride of the youth living in the village as it benefits to the processing of local products	0-4	3,76	93,75
6	The pride of youth consuming local agricultural products as daily food	0-4	3,91	97,66

Table 1 (Contd.)

No	Indicator	Score Interval	Average Score	Level of Perception (%)
7	As youth in a village working in agriculture is not a shame	0-2	0,91	92,19
8	As youth in a village working in agriculture is not a disgrace as it has opportunity to own a large area of land	0-2	1,84	92,97
9	As youth in a village working in agriculture is not a pudency because it can preserve parent's farmland	0-2	1,86	96,09
Total D		0-30	27,48	-
Average D		-	-	91,97
Total (A+B+C+D)		0-110	99,59	-
Average (A+B+C+D)		-	-	82,33

Source : Primary Data Analysis, 2017

The above table above gives an illustration that the perception of youth on agricultural systems can be classified high (more than 80%). From the four aspects, aspect of youth participation is the lowest. This indicates that rural agriculture is being a "warning" to be well managed. If not, then there is no possibility of youth to be in charge on the farm. If this situation occurs in agriculture, this sector is no longer attractive to a large portion of the youth. Alternative solutions to this condition should be sought immediately for agricultural sustainability in the future.

B. Motivation

Motivation is an encouragement coming from within a person or from his environment. Motivation referred in this study is the motivation of farmers in following the integrated agricultural program which is meant as how strong the encouragement felt by farmers in following the cocoa-goat integration program. This is due to the large number of cocoa planted by farmers in the area, but still lack of existing technology, both for cultivation and

post-harvest, so that the production has not maximal yet. Lack of knowledge of farmers on cultivation technology and post-harvest processing is causing the production of cocoa be sold with raw or unprocessed conditions. Raw cacao will certainly be sold at a low price, contrary to the high price of processed cocoa. Therefore, the emergence of cultivation technology and post-harvest of Taman Teknologi Pertanian Yogyakarta (the Agricultural Technology Park of Yogyakarta), which is able to share new knowledge about cultivation and post-harvest technology of cocoa crops.

In this study, motivation is divided into three components of needs, namely the needs for existence, needs for relatedness and need for growth. The classification of motivation into three is based on the theory of motivation explained by Alderfer which is the theory of motivation ERG. Existence needs an encouragement to stay alive. This motivation includes the fulfillment of basic human needs such as food,

clothing, shelter, and safe. Needs relatedness is a human need for social relationships. This social relations is to communicate and socialize with others. The need for growth is a person needs to continue to grow and develop according to their respective professions. These

three components of motivational needs affect the formation of low, medium and high farmer motivation. The motivation of farmers in following the integration program of cocoa-goat PE at Nglanggeran Agricultural Technology Park can be seen in Table 2.

Table 2 Farmer's Motivation in Following Integrated Agriculture Program

No	Indicator	Score Interval	Average Score	Level of Motivation (%)
A. Existence				
1	The desire to meet the necessities of life	0-4	3,42	85,59
2	The urge to fulfill the family's clothing needs	0-4	3,54	88,56
3	The eagerness to satisfy the needs of family food	0-4	3,54	88,56
4	The longing to cater the needs of family boards	0-4	3,54	88,56
5	The motivation to keep family health needs	0-4	3,51	87,71
6	The desire to meet the needs of family education	0-4	3,53	88,14
7	The force to improve living standards as a farmer	0-4	3,69	92,37
Total A		0-28	24,78	-
Average A		-	-	87,83
B. Relatedness				
1	The desire to forge more intimate relationships with farmers	0-4	3,93	98,33
2	The urge to cooperate with the community	0-4	3,83	95,83
Total B		0-8	7,76	-
Average B		-	-	97,08
C. Growth				
1	The desire to develop inner potential	0-4	3,81	95,34
2	The eagerness to increase knowledge and knowledge in agriculture	0-4	3,73	93,22
3	The force to improve skills in agricultural cultivation	0-4	3,81	95,34
4	The encouragement to become an expert in agriculture	0-4	3,27	81,78
5	The pushfor promote agriculture in Indonesia	0-4	3,8	94,92
Total C		0-20	18,42	-
Average C		-	-	92,12
Total (A+B+C)		0-56	50,96	-
Average (A+B+C)		-	-	92,34

Source : Primary Data Analysis, 2017

Based on Table 2, it can be summarized that the motivation of farmers in following the integration program of cocoa-goat PE 92.34%. This shows that the motivation of farmers in following the program is high. When viewed on each component, then component of relatedness needs have the highest average of 97.08%, while the needs of existence which are the main need of human beings actually have the lowest average of 87.83%. This suggests that farming by integrating several types of businesses requires the need to connect with other peoples. Implementation of business integrase involves many people or many institutions. In this case sometimes the need for existence is not necessarily the main requirement.

C. Local Food

Local food becomes the natural resources of an area that has considerable potential to support the sustainability of the life of residents as long as it can be utilized optimally. Local food is broadly defined as any form of resource derived from the area which is used as food for human consumption including any additional ingredients used during the processing or manufacture of food. Each region has its

potential including Gunungkidul Regency. Bejiharjo Village is one of the villages in Gunungkidul Regency, precisely in Karangmojo Sub-district, which has a large land and very potential for the development of local food.

Those potentials will be more optimized if the role for the community is known. Processed local food become one of the commodities that can be a business run by the people around Bejiharjo village to support households in fulfilling their life needs. Revenues earned from the business can be used by households to purchase other needs, including daily food needs.

1. Processed Local Food: Some foodstuffs such as cassava, corn, sorghum, soybeans, peanuts, and others grow well enough. Not only food is well developed in Bejiharjo, but also processed local food such as various kinds of chips, crisp (thin chip made of flour and peanuts), tapai (sweet cake made of fermented cassava, rice crisp craker (made of glutinous rice), and so on develop well in Bejiharjo. This business is done by the community, especially women. In detail the kind of processed food in the village of Bejiharjo is as follows:

Table 3 Kind of Processed Products

Number	Ingredient	Processed	Serving Characteristic
1	Fruit	Banana chips Banana hump chips	Dry Dry
3	Vegetables	Spinach chips	Dry
4	Peanut	Tofu Tempeh	Dry Dry
6	Corn	Corn stick Corn chips	Dry Dry
8	Tubers	Cassava chips Tapai (from fermented cassava) Sweet potatoes chips	Dry Dry Dry
11	Sorghum	Sorghum stick	Dry
12	Rice	Rice crisp craker	Dry

Source : Primary Data Analysis, 2017

From Table 3, it can be explained that all products are produced in dried products. This is done to anticipate if products are not directly purchased by customers. Actually, some products are also made in wet conditions, but it makes less durable so this agricultural postharvest business has not developed well and the products are only sold in local market. Meanwhile, dried processed products are already sold in food outlets and tourist sites.

2. Household Income: The household income referred to this study is the difference between total household's income and expenditure. The study grouped household income which comes from households running local food processing business and those who don't. The average of household income of Bejiharjo Village can be seen in Table 4, below:

Table 4 Average household income of Bejiharjo Village

No.	Group of Household	Income (IDR/Month)
1.	Owner of local food processing business	1.967.129
2.	Not the owner of local food processing business	869.075
Average		1.418.102

Source : Primary Data Analysis, 2017

Based on Table 4, it can be seen that household income of local food processing business owners is higher than income from households that do not have local food processing business.

D. Strengths, Weaknesses, Opportunities, and Threats (SWOT) in Integrated Agricultural Development

According to the research findings conducted through interviews, FGDs, observations and secondary data studies in the villages and districts, the following figures are obtained:

1. Strengths:

- a. Highly diversified commodities
- b. Total area is more than 40% of DIY total area)
- c. Number of productive population
- d. The youth have a good perception
- e. The community has high motivation in integrated agricultural development

2. Weaknesses

- a. Lack of coordination among units.
- b. Utilization of dry land area has not optimal yet

The processing of agricultural products has not been maximized

3. Opportunities

- a. Government regulations for integrated agricultural development.
- b. Sectoral ego budget politics

4. Threats

- a. Investors outside the regency who lack the use of available labor,
- b. Investors outside the regency are reluctant to empower locally available labor
- c. Restrictions on access to community groups "within" their environment

Based on the mapping, it is figured SWOT matrix as follows:

Swot Matrix Analysis

Internal Factors	Strengths (S)	Weaknesses (W)
	External Factors	<ol style="list-style-type: none"> 1. Highly diversified commodities 2. Total areas more than 40% total area of Special Region of Yogyakarta (DIY) 3. A number of productive population 4. The youth have a good perception 5. The community has high motivation in integrated agricultural development
Opportunities (O)		<ol style="list-style-type: none"> 1. The use of local commodities to mobilize the community economy by managing the available budget 2. Maximizing combination of commodities for integrated agricultural development 3. Increasing the capacity of productive residents by optimizing the regulation of integrated agricultural development based on their perception and motivation
<ol style="list-style-type: none"> 1. Government regulation for integrated agricultural development. 2. Sectoral ego budget politics 		
Threats (T)	<ol style="list-style-type: none"> 1. Holding a training for productive population for the provision of skilled labor in the region 2. High motivation from the public has to be maximized to open access for every citizen 	<ol style="list-style-type: none"> 1. The habit of managing dry land becomes an asset for bargaining with investors related to undertaken business development 2. Provision of access to communities by utilizing improved coordination among units that can strengthen each other
<ol style="list-style-type: none"> 1. Investors outside the regency are reluctant to empower locally available labor 2. Restrictions on access to community groups "within" their environment 		

Conclusion

1. Integrated development implemented in Gunung Kidul is a combination of food crops-livestock, livestock-perennial crops and livestock-horticulture can be increased by utilizing existing and suitable land.

2. The combination for integrated agricultural development, that is implemented, are animal – vegetable, animal – cash crop, and animal – annual crop
3. The perception of youth in agricultural development is high.
4. Motivation of community members in the implementation of integrated agriculture is high.
5. Local food processing business can be run to increase family income.
6. Strategy for SO, WO, ST, WT can be tried to optimize the implementation of integrated development in Gunungkidul Regency.

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