Enhancing effectiveness of agriculture group in supporting government program to increase food security

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Enhancing effectiveness of agriculture group in supporting government program to increase food security

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Abstract. Food Security is closely related to agriculture, including fisheries. Food is a basic necessity and indispensable to humans. Nowadays, there are many agricultural lands and fisheries are turning to settlements and offices. To overcome these obstacles, the government took the policy of forming farmer groups. Farmer groups are channeling the government assistance, whether capital, seeds, training, or technology and knowledge assistance. This research is qualitative. The population in this study were members of the fish farming group in Purwomartani, Kalasan, Sleman. The population in this study were 4 Farmers Group in Purwomartani, Kalasan, Sleman. The sample in this research is 1 farmer group with the largest number of members that is 31 people. For the other three groups of fish farmers the number of members is 20 people. The results show that farmer groups are effective in supporting government programs. The role of farmer groups is needed to support the successful management of agricultural land, improvement of knowledge and skills of fish farmers, renewal of agricultural technology and equipment, and marketing of agricultural products.

Key words: Food Security, Farmer Group, Technology, Management

1. Introduction
Food is one of the basic necessities for every living creature, every living thing trying to meet this food needs. Food demand is also a major factor for the success of the government programs. Food availability is also an indicator of wellbeing. Food can be the trigger of a conflict between regions and countries. Food needs for people can be met from agriculture, fishery, and plantation. In accordance with the narrative about the fulfillment of food needs in the district of Sleman, especially in the village of Purwomartani, there are several kinds of potential that has been cultivated by the residents. These potentials include paddy fields such as rice, plantation agriculture such as salak pondoh, land fisheries such as freshwater fish ponds. The existence of aquaculture business has a considerable economic function, it is seen with the existence of ponds that are located around the river. Even in some areas not only cultivated with minimal and small capital, but also attract large investors to invest in the form of fishing ponds and restaurants. Sleman Regency is geographically a land that is far from the coast, but this limitation does not make the creativity of its citizens stunted. This can be seen from the existence of fishery cultivation in Purwomartani village that can accommodate the economic potential...
of Sleman Regency in general, and Purwomartani Village in particular, most of the people are engaged in the informal trading sector.

Fish cultivation is an activity of breeding or fish enlargement aimed to increase production, productivity, and quality [7]. In supporting the production process of fishery the availability of quality and sustainable fishery resources is important, because the quality and quantity of resources will affect the pattern and direction of production and marketing. Therefore, management and utilization of water resources should be done wisely by taking into account aspects of production factors and benefits [5].

Fisheries is a sub-sector of agriculture in the broad sense, thus development in the agricultural sector including development in the fishery sub-sector by increasing the production of fishery business also means increasing the income of fishermen and fish farmers. Therefore, all fishery resources can be utilized to improve the living standards and welfare of fishermen and fish farmers in particular, and the people of Indonesia in general [5].

In an effort to support the existence of creative business citizens in the field of fish cultivation through empowerment programs of small and medium enterprises, government of the District of Sleman actually has acted quickly by making various efforts to give support. Some of them are training the representatives of each group of farmers, coaching through extension workers (in Indonesia Petugas Penyuluh Pertanian or PPL), distributing equipment to each member of the group of cultivators, and soft loan distribution with interest enough to each group. Formerly the distribution of soft loans through the National Community Empowerment Program (PNPM) Mandiri, but currently the distribution of assistance through cooperatives. Therefore, in the village of Purwomartani also formed a cooperative "Mina Manunggal" which functioned as a medium distribution of government assistance programs. Distribution of government credit assistance through cooperatives, because the cooperative is a legal entity. Cooperative "Mina Manunggal" was formed in 2011. Members of the cooperative "Mina Manunggal" are the managers of farmer groups in the village of Purwomartani. At the time of the monetary crisis that began in 1997, nearly 80% of large businesses went bankrupt and made mass layoffs to their employees. However, the cultivation of fisheries conducted by farmer groups, most still can survive in crisis with all its limitations. In addition, as a business sector run in the lower and middle level, fishery cultivation conducted by communities in this farmer group has a major role in reducing unemployment. International donor agencies show an interest in supporting the development of small and medium enterprises.

Farmers are people who work on crops, animals, and fish as a daily livelihood. In Indonesian Big Dictionary, farmers are people whose livelihood is planting. In the Agricultural Extension System Legislation, the definition of the farmer is an individual Indonesian citizen and his family or cooperative who manages business in agriculture, agroforestry, minatani, agropasture, breeding of animals and plants, in and around the forest, including upstream business, farming, agro-industry, marketing, and supporting services [3].

Modern agriculture was developed in line with the history of agricultural extension in Indonesia, agriculturalization of agriculture with new technologies, introduced to farmers through the media of farmer groups. The development of farmer groups started with the establishment of rural extension centers. In 1948, Soewardjo sparked the establishment of a Village Community Education Center (BPMD) in each sub-district as a village community education center, from 1950 to 1956 a total of 375 BPMDs could be built in Indonesia. In 1959 there was established the Operation Command of the Prosperous Movement (KOGM) aimed at increasing the production of food, especially rice, and in the rural areas a farmer organization was formed to implement the five farming enterprises which later developed into farmer groups. During the first five-year development period of 1969-1974, farmers' groups grew and developed, Agricultural Counseling Center (BPP) was developed and during the second five-year development phase up to the fifth stage (1974-1994) agricultural extension institution was continuously improved and reproduced [3].

The definition of food according to Law No. 7 of 1996 is: "Everything derived from biological resources and water, whether processed or not processed, which is intended as food or drink for
human consumption, including food additives, food raw materials, and Other materials used in the process of preparing, processing, and or preparing food and beverages [1].

Food is one of the basic human needs that is part of human rights, as set forth in the Universal Declaration of Human Rights in 1948, and Law No. 7 of 1996 on Food. The definition of food is the ingredients that are eaten daily to meet the need for maintenance, growth, work, replacement of tissues and regulate the processes in the body. Staple food, which is food that is eaten regularly by a group of people in large enough quantities, to produce most of the energy source. Food is consumed by humans to get energy power to perform life activities (such as breathing, working, building, and replacing damaged tissue). Food is a fuel that serves as a source of energy [11].

Meanwhile, according to the Food and Drug Administration, food for consumption that is not only in the form of rice, but also vegetables, fruits, meat both poultry and cattle, fish, eggs, also water. Food security according to the Law no. 7 of 1996 on Food Article 1 paragraph 17 is the condition of the fulfillment of adequate food, both in quantity and quality, and safe, equitable, and affordable [11].

Food security according to the Rome Declaration and World Food Summit Plan of Action (1996) is "... when all people, at all time, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and foods preferences for an active and Healthy life [11]. FAO (1992) defines food security as a situation where at all times it has adequate amounts of food that is safe and nutritious for a healthy and active life. In general, food security is a guarantee that the food and nutritional needs of every resident are the main condition in achieving the level of health and well-being sufficient [4].

2. Literature Review

As a literature review, the farmer group “Mina Perkasa has same type with farmer group in Cakuang district. The results of the empowerment of rice field agribusiness system (Oryza sativa L.) in Cangkuang are: 1) Increasing knowledge, attitude and skills of farmers about the optimal utilization of production facilities, and the establishment of cooperation between farmers and providers of production facilities; 2) Increasing knowledge, attitude and skill of farmer about improvement of rice cultivation technique; 3) Increasing knowledge and attitude of farmers about role and function of farmer group in supporting farming activity. Fostering farmer groups in an effort to empower the group is directed at all subsystems agroinput and agropoduct. The guidance of farmer groups is done through counseling about the role and function of farmer groups as learning rides, production units and cooperation rides between members in farmer groups, between farmer groups and other farmer groups, and between farmer groups and other agribusiness actors [2]. Farmer groups play various roles, as a forum for farming and organizational learning, cooperation vehicle, farming production unit, in addition farmer group also play a role in giving feedback about performance of a technology [8].

The same type also shown by Shinta Anggun Lowisada journal, the existence of farmer groups can be seen from the group members who join to get benefits such as fertilizer subsidy, the support of government and society, and the continuity of activities such as empowerment through regular meetings and mutual cooperation. Capital assistance from Gapoktan is also one of the things of existence, making it easier to get low-priced auction pads, giving members the ability to plan and implement in improving joint production facilities and ease of government aid information in the form of capital and production facilities. The collective action of collectivity of production which includes management of irrigation resources, the ease of provision of production facilities, the collectivity of capital, and accommodating the aspirations of members, gives more opportunity to the members of farmer groups to overcome its limitations and is proof of the existence of farmer groups [9].

Sa’diyah in his journal stated Joglo Tani greatly contribute in improving the role of youth, so that Joglo Tani youth can play an active role in the development of the agricultural sector in order to realize food security. The role of youth in the form of the role of production, the role of promotion and marketing, and the role of community empowerment. The role of Joglo Tani youth in the agricultural sector is not always easy, but there are some obstacles that are faced: (1) technical: lack of youth spirit, land degradation, uncertain weather conditions, minimal costs, lack of youth-based agricultural
training, (2) lack of support Social community, (3) lack of government support. Strategic efforts made by youth Joglo Tani in realizing food security with reference to indicators of food security theory to meet food needs ranging from individual to state both the number and quality it can be concluded that youth Joglo Tani has contributed to realize food security. The role of youth Joglo Tani is a role implemented by farmer groups [6].

The market structure at the level of medium concentration oligopsony traders who have a moderate strength in market performance. Market structure at the kecamatan trader level. Low oligopsony that shows traders have low levels of strength in market performance. Market structure at the whole seller level is a high concentration oligopsony which indicates a high power in influencing the market, so that other institutions are needed as farmer groups to cut the dependence of farmers on traders [10].

3. Research Methods
3.1 Methods
The type of research used is survey research. In the survey research data obtained is the real data that exist in the field at the time of data retrieval research done, and not done a treatment on the object of research. This research is descriptive. Qualitative analysis approach to describe Farmer Group Effectiveness, especially on fish farmers in supporting government programs to improve food security.

3.2 Time of Research
Implementation of the study was conducted in January 2014 to May 2014 in Purwomartani Village, Kalasan District, Sleman Regency, of Yogyakarta Special Province. The location is expected to gain primary data generated from participants' observation techniques and interviews with farmers group managers of fish farmers.

3.3 Population Research
The population in this study were members of fish farming groups in Purwomartani, Kalasan, Sleman, Yogyakarta Special Province. In Purwomartani, Kalasan, Sleman there are four (4) fish farming groups, namely "Mina Suka Mandiri", "Mina Suka Makmur", "Mina Perkasa", and "Mina Rejo" fish farming group. These four fish farming groups have the same business, ie most of the group members in the field of fish cultivation, meaning that farmer group members buy fish seeds from other farmer groups or from seed traders, then they raise the fish for sale to consumers or restaurants. But there are also members of the group who concentrate on fish nurseries, although in terms of numbers there are still many more fish farmers trying in the liberation field.

3.4 Sample Research
The sample was taken by purposive sampling by taking the farmer group of fish farmer with the largest number of members among the four farmer groups in the population in order to obtain more information, giving better description of the role of farmer group of fish farmers in supporting the family economic resilience, and Play a role in maintaining food security. Therefore, fish farming group used in this research is farmer group of "Mina Perkasa" which has 31 members. For the other three groups of fish farmers the number of members is 20 people.

4. Discussion
Good food security in a region can maintain the resilience of the area well because food is a major requirement. We can imagine if there is food shortage in a region, it can have an impact on the vulnerability conditions in the region. Crime will increase, people will fight over food, strong and powerful will surely be the winner in this struggle. People become easily emotional because the affairs of the fulfillment of food needs are not guaranteed. The vulnerability of conditions in a region can cause a nation's national resilience condition to be threatened, people will tend to be selfish. With good food conditions, the nutritional fulfillment of citizens will be good too, and of course this can affect
the national resilience of a nation. If the nutrition of its citizens is fulfilled, then the physical and intellectual qualities of the citizens will be good as well.

The essence of National Resilience lies in the ability and resilience of a nation to maintain its existence towards a desired future. Applied to the nation of Indonesia, the essence of National Resilience is the ability and resilience of the Indonesian nation to maintain and develop the sustainability of a unitary state that covers the area from Sabang to Merauke with Pancasila as its ideological foundation. [2]

In GBHN 1978 there is a paragraph on National Resilience:
"National Resilience is a dynamic condition that is an integration of the conditions of each aspect of the life of the Nation and the State. In essence the National Resilience is the ability and resilience of a nation to be able to guarantee its survival towards the glory of the Nation and the State ".

"...... The success of the National Development will increase the National Resilience. Furthermore, resilient National Resilience will further encourage National Development. .... Insight in achieving National Development is the Insight of Archipelago ".[2]

Based on the description, good food security can have an impact on the resilience of an area and the most extensive impact on national resilience of a country. With guaranteed food, the existence of a country will be guaranteed. The country will have the power to face the things that threaten its existence.

Based on the interviews, it was found that the scope of the activities of the “Mina Perkasa” fish farmer group included 1) extension and training activities, and 2) field activities or pools (ie seed procurement, enlargement, maintenance, harvesting and marketing). In addition to these activities, there are also land processing activities, so that the land / pond used does not experience saturation and can be used again after harvesting fish. Before the land is used for the pond, also done the processing first, such as the installation of tarpaulins to prevent leakage, installation of pralon and drainage making for water in healthy ponds and oxygen in the pond awake. Therefore, it would be better to install a water mill to make the air in the pool healthier, and water hyacinth plants and other aquatic plants. This is as disclosed by Mr. Tri, member of the farmer group "Mina Perkasa".

He said: "Before the pond is used first processed mas, let me not smell the cement, wear tarpaulins, given water hyacinth, it is also for eyup-eyupan fish. Let the water be given by the sewer, every day checked, better to use the waterwheel to keep the water flowing, the healthy fish mas"

The members of fish farming groups that concentrate in the field of enlargement more when compared to those who do nursery business. This is because of a greater risk factor if attempted in the nursery than if at enlargement. Seedlings are easily killed by disease and require special treatment, especially if done in a simple pond by the river as done by members of fish farming groups. This is because the age of the fish is younger so that the immune system is more susceptible to disease than the cultivators / enlargement. However, enlargement efforts should also be wary of attacks of fish diseases such as fungi, especially in transition season / seasonal changes from rainy season to dry season or vice versa. In that season, the air condition is easily changed so that the fish is a little difficult to adjust the condition. In this season, farmers usually sprinkle salt so that the condition of the pond water is better and so the mushrooms are not easy to grow and attack the fish.

The secretary said: "Usually when the season of transition weather is uncertain, so the fish easily got the disease, usually mushrooms Sir. Well to overcome it usually use salt in the pool, group members are more interested in the enlargement of fish than the nursery, because the risk of death if the seeds are larger, if many dead (we will be) loss later"

To increase the fish production, Sleman district government also conducted various coaching and mentoring efforts to the fish farmers. This mentoring and guidance is usually done by related agencies, such as agriculture service, cooperative service, and trade. Coaching and training is conducted through
counseling during the farmer group meeting. In relation to training and development activities of the Department of Agriculture, Fisheries and Forestry of Sleman Regency, Rewang Sukirman gives the following explanation.

_He said: "The activities of fisheries agendas in particular in Sleman District, fisheries agendas are not only in" Mina Perkasa "but I am a subdistrict, but overall we are not just" Mina Perkasa "like apprentice farmers to successful farmers. Course cultivation, managerial every year. Every year there must be training-related programs, "Mina Perkasa" has been trained for standing eight years ago and must be asked by its representative"._

Agricultural extension is an extension of the government. To carry out their duties, agricultural extension officers coordinate with the farmer group managers. The government's guidance not only deals with technical matters on fish farming, but also deals with managerial and marketing, such as good marketing and good bookkeeping, to facilitate the management of farmer groups if at any time requested information by members and the government.

In large group meetings, generally one sub-district, in addition to conveying various information or policies in the field of fisheries, field extension officers also provide input on the problems that have been submitted by the farmer group's board before the meeting took place. It is as revealed by Rewang Sukirman as follows:

"Before the next 35-day group meeting there should be any material that will be submitted with regard to technical or related to feed, so what is really needed by the farmers, what our group wants. So, usually before the meeting is held, we (agricultural extension officers) prepare the material and study"

Field Extension Officers also conduct direct guidance on the group, as revealed by Rewang Sukirman: "Which must have been a regular group meeting, the fish farmer group" Mina Perkasa" we focus on Wednesday night, that is usually the least activity we advise in relation to cultivation techniques, what we want, what the group wants, We follow, we prepare the material"

Communication between the agency and field extension officers took place quite smoothly. Ismunawan said: "It is usually if we fit the disease, sometimes there is a help from the service, sometimes the extension came (to inform)".

In Kalasan District, there is a Communication Forum of Fish Cultivators such as Rewang Sukirman: The role of Field Extension Officers is considerable in terms of farmer consultation to resolve field constraints. If there are obstacles that are difficult to solve by the group members then the group management will contact the Field Extension Officers, especially in the case of cultivation so that at the regular meeting of the cultivation group in the future The Field Extension Officer can provide solutions based on his knowledge and experience in the form of guidance, advice and advice. Generally, farmers do not have formal knowledge in the field of fisheries.

"Coaching, in the field there is PPL so intensely we are doing the coaching so that farmers succeed in obtaining maximum production".

Extension agents are instrumental in the success of the agricultural production process. This was disclosed by Mr. Parjo who is a member of the farmer group "Mina Perkasa".

_He said "The agricultural extension worker is very helpful for the fish production of group members, the farmer group members are also very helpful to their members"._

The existence of coaching from the government through field extension officers can improve the success of fish farming, so that the harvest was pretty good in its quality and quantity. They feel
facilitate in cultivation and marketing with the existence of farmer groups. Their principle, if the problem is faced together, will definitely not feel difficult. With the farmer groups they can save on production costs, some of which farmers do not need to buy their own water pump to drain the pond. The water pump is jointly owned, so it also saves on maintenance costs. To buy seeds are usually purchased collectively, even they also have group cash that can be borrowed by members for the purposes of fish production and personal purposes, of course this can improve the welfare of farmers. In terms of marketing, the role of farmers' groups is also quite large, where farmer group members provide services to their members by linking farmers and restaurants or fishing who will buy crops. This was revealed from an interview with Mr. Parjo who is a farmer member of a farmer group.

"For the purposes of seeds, feed and equipment and marketing, farmers group members are quite active in finding breakthroughs with our partners, we also work together"

Communication between farmer groups is also quite effective. Mr. Semi said:

"Because they both share the same river flow we can not mentang and need the most, we have to tolerate and maintain the river, let our ponds well also".

To maintain the cleanliness of the river sometimes we also do joint work and not only followed by one member of the farmer group, but also done by members of other farmer groups.

Mr. Semi said:"In order for the good river condition, they also prohibit the disposal of garbage in the river, because if someone throws waste in the river it is feared to contaminate the fish pond of the farmers, this can even lead to death in fish. But the use of rivers for fish ponds can also pose a risk to their business continuity, ie during the rainy season sometimes the river flow is quite heavy and the river water surface can overflow, which can affect the existing ponds. Because the capacity of the river is quite limited, so the river water will flood the pools around it. And this could have an impact on the existing fish becoming water-soluble, the farmers would lose money."

Cooperation between farmer groups is also seen from the handling of fish harvest, usually they help each other to harvest the fish, once the harvest can be up to 1-1.5 tons. At the time of harvest, usually the farmers group representatives will contact the fishing and restaurant. Each farmer harvest will be deducted Rp10,000, - per kuintal to support the farmers group cash, will be useful for the farmers themselves, because it can be used to buy the equipment used collectively and savings and loan between members. For harvesting is not done simultaneously all members/ all ponds, but gradually. This is to maintain the selling value and quality of fish to be consumed by consumers.

The "Mina Perkasa" fish farmers still use simple processing technology. This is due to limited capital factor, while to use modern technology would require a large capital.

Mr Semi said: “The technology (that we used) is still limited Mas, most pump. For cultivation of land we still rely on experience, “mouth to mouth” between farmers. In addition, our capital is also limited”

5. Conclusion and Suggestion

5.1 Conclusion
a. Fish farming by fish farmers can support food security
b. The role of farmer groups is very supportive in fish production.

5.2 Suggestion
a. Further research is needed on the role of agricultural extension workers in other farmer groups.
b. Need infrastructure such as adequate equipment for farmer group members so that fish production to be better quality and quantity and can support food security.

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