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EXISTENCE OF RURAL COMMUNITY IN THE DISSEMINATION OF AQUAPONIC TECHNOLOGY AT AGROTURISM VILLAGE

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ABSTRACT

The goal of this research is aimed to find the existence of rural communities in the dissemination of aquaponic technology. The research's location is determined purposively in rural areas agrotourism of Kutasari District, Purbalingga Regency, Central Java Province. In the first phase of this research was used applied research designs. The research's result showed that farmers of rural communities have internally and externally potensial for supporting dissemination of aquaponic technology. The level of success of raising the existency depend on the farmers and regional government for enlarging rural community and its local institutions in which be build. Existence villagers always important to consider in aquaponic technology dissemination process. Perceptions and responses given the villagers have a strong influence on the success of technology dissemination aquaponics devoted to the welfare of farmers in rural residents. Implication can be drwan from this, social and economic functions aquaponic technology also be a consideration for prospective adopter aquaponic technology '. With dissemination characteristics of the existing aquaponics process in rural communities in the area of agro requires awareness and mentoring functions and benefits at an early stage.

Keywords: *existency, rural community, dissemination, aquaponic technology*

INTRODUCTION

Poverty and under development are two phenomenon that characterize our rural communities. The ability of rural entrepreneurship is weak making it difficult to utilize every opportunity and real economic opportunities spread around. Various natural resources available in rural residents have not been optimally processed into economically valuable products. Social reality so easily found on the social structure of rural communities, including in the area of agrotourism.

Some of our laborforce are still unemployment and jobless.

Akuaponic technology is one of creative innovation management mix for increased production of environmentally friendly farming in the countryside. The results of the study Santosa, et al., (2010) showed that the dissemination of technology akuaponic able to empower the farmers in the rural economy. Peasant farmers who have adopted the technology aquaponic gained some following advantages: assuredness income, availability of family nutrition, can be managed in a narrow area and serves a diversified livelihood opportunities in the rural productive farmers. Results of research conducted by Rakocy, et al., (2006) found akuaponic technology adoption does have a double advantage: first establish the natural environment recirculation system and the second gives mutualism symbiotic relationship for fish and plants are cultivated simultaneously. Erwiantono, et al., (2009) proved that the development of suitable models aquaponik as aquaculture business optimization solutions are able to strengthen revenue and preserve natural ecosystems in Rural Samarinda, East Kalimantan. This is understandable because akuaponic technology is a combination of the two systems that work synergistically ie between hydroponics with aquaculture. Thus, aquaponic technology has a social and aconomic function.

For villagers in Banyumas and Purbalingga agrotourism, mix farming management- is not yet oriented on the forms of creative business income. Generally, micro bisniss of farmers is still small scale, less business-oriented creative, less environmentally friendly and low innovation. Diversification of mix farming businesses are rarely managed to implement a public awareness for application on akuaponic technology. As a consequence, the income derived from the management of mixed farming is relatively low. To that end, there should be a study evaluating the existence of rural communities in the process of technology dissemination in the agro aquaponic.

This theme supports rural development based on local resources. The research problem is how the existence of rural communities in the dissemination of technology aquaponik?

RESEARCH GOALS

Based on the discription above, the goal of this reseach is to review and find out how the existence of rural communities in the dissemination of aquaponic technology.

RESEARCH METHOD

This research is a part of applied research design. This is still the first stage. This research is used a descriptive case study method with a combination of qualitative and quantitative approaches. The research's location is determined purposively in rural areas agrotourism of Kutasari District, Purbalingga Regency, Central Java Province.

Sources of research data consists of all members of rural communities living in rural sub-district Kutasari . The number of respondents was determined by census techniques. Key informants are set by using the snowball rolling .

Primary data collection techniques are performed in-depth interviews, Focus Group Discussions (FGD) and observation. Secondary data collection techniques to the analysis of materials on a variety of documents, articles, results of previous studies , records and other relevant literature . Data processing techniques qualitatively and quantitatively . The series of data analysis and processing activities carried on-going analysis. Data processing take place at the same time with the current data collection took place .

RESULTS AND DISCUSSION

The village community is acommunity group that has some characteristics of a particular locality based on common bonds. Some of the traits that characterizet he presence of the villagers reflected the accumulation of homogeneity observed characteristics of individual residents of some social components follows: (1) the existence ofa relativelyhomogeneousocialnorms, (2) the trend ofliving, (3) adherence to social norms, (4) community sentiment, (5) the similarity of the perception of somet hing innovative, (6) the style of indigenous cultures and local traditions, (7) space motion autonomy, (8) the dependence on various external parties as providers of services, programs, projects and material assistance, (9) attachment on certain local institutions.

Similarly, the rural communities in the district agrotourism Kutasari has a row of special features.

Order values and social norms that are instutionalized to the structure of society shows that there is togetherness and concern among citizens for example in : mutual cooperation and social dedication in maintaining various community activities. Some of the facilities and infrastructure of the social nature of the public interest that there is in the Kutasari and Karangcegak Village known results from togetherness and communal work to meet the needs of the community both in terms of spiritual, social, economic and environmental. In each village have at least a mosque for worship means citizens. Some facilities was built in front of the citizens of the co- use of some domestic and agricultural interests . Some times, togetherness can be manifested in the development of physical facilities as such as cultivation orchard and building The Garden of Qur'an Education (TPQ) and The Space of Security Basecamp. Social values and norms, in term of togetherness concern among fellow citizens belong to the relatively high number of cases directly concerned with the problem of togetherness. This is also reflected also in faith (belief) that looked at a phenomenon of truth from the community's collective beliefs .

In the economic view, value of collectivity provide a strong influence on technology dissemination which offered to the peasants in managing mix farming that environmentally friendly. The use of aquaponic technology potentially increase farmers' income from monoculture farming toward multiculture farming by touching aspects of the community and training with the introduction of group technology approach will be more easily dissemination akuaponic technology, although initially still be intrigued and awareness (the cognitive aspect) residents villagers to know the importance of technology akuaponic. In the end, technology transfer aquaponic able to motivate some people to determine it as an solution to strengthen a safety valve and they will get as income generating alternatives.

Social characteristic showed that the majority of residents in the area of agro Kutasari as the food provider, fish and meat from the results their mix farming. Some members of the public have skilled to manage various types of micro-enterprises, especially in the field of agro-industry . There are also some community members who search a living as laborers / employees in industry of eyelashes. In addition, most of the other members of the community have been able to develop a good livelihood diversification in agriculture or non-agriculture . Gradually, farmers are able to conduct diversification between business management and

aquaponic technology. Both of them is very suitable to enlarge farmers capability.

Social ties among residents in the area of agro Kutasari classified as either strong category in the level of individual and group and between the same village residents. Tolerance become an important capital in term of social relationship between people and its interaction. Strong social relationships are not only found on asymmetric relation but also symmetric relationship. Asymmetrical social relationships are shown on the interaction between citizens of different villages in

socioeconomic status, but there is no social polarization among them. There are many social safety valve that connects the inter- strata . Meanwhile, there is a symmetrical relationship in the network among people who have similarities in terms of social economy status.

Residents who inhabited in the village of Kutasari generally have strong community sentiment. Some of the elements that make up the sentiments of the people in the village community and the village of Kutasari shown in Figure 1.

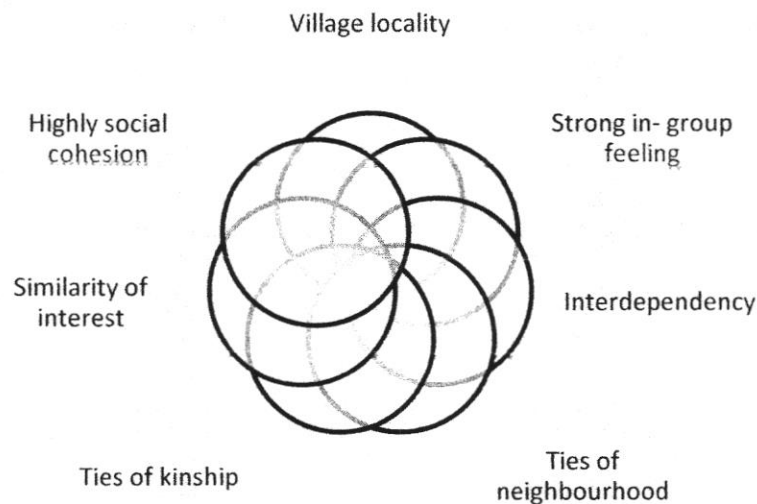


Figure1. Some Elements that Make Up The Community Sentiments of the Village of Kutasari

In the process of technology dissemination there are some elements of community sentiment that can be used as line of action for supporting participation. The power of social cohesion is a key the successfull on akuaponic technology dissemination both Karangcegak and Kutasari village.

Farmer's perception in rural communities in the village of Kutasari tend to respons positively to aquaponic technology. This has supported the dissemination process aquaponics technology to the farming community. The farmers have a similar perception on the received information. It can be indicated from social atmosphere of the following:

- a) There are similarity of thoughts that akuaponic technology has economic, social and environmental benefit.
- b) There are taste similarity that akuaponic technology as one of means of

diversification between fishery and plant cultivation with environmentally friendly.

The style of indigenous cultures and local traditions are important to be note when the process of technological dissemination to be conducted in the social structure, in the same time, it will be discovered the following signs:

- a. The relationship between personal close, intimate, familiar and patterned paternalistic.
- b. Have a basic living in agriculture world.
- c. The majority are reluctant to bear the risk for the implementation of new technologies (aquaponic).
- d. More concerned with social relationships than economically motivated relationships.

Based on the opinions Rahardjo (1999) is noted that the agrarian village communities are still concerned with personal relationships. However, the reality in Village of Kutasari showed that most

people experience a gradual transition from the traditional pattern of subsistence farming towards commercial farming patterns. The production is plucked every harvest season was sold to the village market to get a certain bill of Rupiah. Meanwhile, some other agricultural production kept for family food reserves.

Farmers life is not only effected by household economic system but also are affected by the power system at the rural government. Village administration system is effectively affected and determine social patronage in the village. However, electability a village chief was also determined by social and economic share is based on profit sharing for certain social groups. In the context of rural development in the area of agro Kutasari there are efforts to strengthen the autonomy took place for along time in various aspects. Space of autonomy in which institutionalized in term of the public interest in some of the following aspects:

- a) Economy (institutional dues, namely "jimpitan", gathering savings and loans).
- b) Social save (fee collection for social activities such as the August 17 's, repair of village
- c) roads / mosque / prayer rooms / pos ronda / post IHC / sports field).
- d) Democracy (village elections / village officials and village financial management).

Autonomy in rural Kutasari not always go smoothly. Some problems often become obstacles such as : unpreparedness community for money accumulation in raising funds and reluctant people

for participated in political activities at level of the village. Not much different, Yuliantara (2002) observed a wide range of complex constraints that is faced by rural community among others : (1) poverty , (2) gap and (3) injustice . To resolve the problem of village autonomy demands diverse liveliness all parties in order to attempt to induce transparency with readiness ' to sit at the same low' in order to improve the performance of village development.

Kutasari rural communities have ties dependence on various external parties as a donor / sponsor both service providers , program , project and construction material support physical and non-physical . Mutually beneficial relationship for obtaining variety of material and non-material assistance among rural communities Kutasari with various external parties take place. Citizens including farmers receive assistance in various forms such as the dissemination of akuaponic technology.

In the midst of social structure in rural Kutasari have been discovered a strong moral bond in certain local institutions . It can be indicated in various local institutional activities that are supported by people participation. Farmers and religious group are local institution that helped rural community have forum community. Both of them have social, economic and religious activities. Rural farmers have potential resources and can be classified as semi innovative in technology dissemination process. Images of the individual characteristics of farmers is on display observed on Table 1 .

Table 1. Farmer Characteristic in The Village of Karangsari

No.	Indicators	Information
1.	Sex	The majority of informants are men who are members of the Group of Mina Tani Maju Jaya. However, there is also a small part of this farmer group members mina which includes having the female sex.
2.	The level of Formal Education	Generally informant went to school just for able to read and write. The level of formal education in the level of primary school and junior high school. There are only a few among the informants who have been able to complete their formal education until senior high school. There are a very few number of informants who managed to attend school up to the college level / diploma two and three.
3.	Non Formal Education (In The Recently Last Years)	Non formal education theme that followed, among others: 1. Extension: aquaponic technology, mixed farming, farm management, a variety of non-rice food, the development of entrepreneurial spirit, the potential of organic agriculture, rural cooperative performance management, packaging techniques of agricultural products, cultivation of chilli, palm sugar processing, feed processing freshwater fish. 2. Training: aquaponic technology, mixed farming, farm management, a variety of non-rice food, the development of entrepreneurial spirit, the potential of organic agriculture, rural cooperative performance management, packaging techniques of agricultural products, cultivation of chilli, palm sugar processing, feed processing freshwater fish. 3.The comparative study/ "Anjang Sana" : aquaculture farming to the mix farming in Pratin

		4. Demonstration plots / demonstration ways: aquaponic technology, management of mixed farming, a variety of non-rice food,
4.	The Main Job	Most informants have main job as a farmer crop farmer (food : rice / corn and vegetables) as well as freshwater fish farmers . Some informants have diligently managing farming chickens and goats as a form of productive diversification in order they have income alternatives
5.	The Additional Jobs	The additional job that occupied by the informants varied. Some are looking for additional income from: trade (open small grocery shop) to sell a variety of everyday household needs), sewing services, breeder chicken / goat and construction workers.
6.	Time duration on mix farming activity	Most informants have work experience managing the mix of farm farming <2 years. There are only four informants who had experience managing the mix of farm farming > 2years.
7.	The level of income (monthly average)	Total household income per month among informant is not the same. The total income of informant start from Rp 700,000 untill Rp 2,000,000. Total income derived from farming, crops, farming of vegetables / fruit, a small farming (chicken / mutton), freshwater fish farms. Most other income derived from off-farm productive activities such as: trade, sewing services, services of construction workers.
8.	Expenditure (monthly average)	Total expenditure of informants every month start from Rp . Rp 600,000 untill Rp 1,500,000 . Expenditure allocated to fulfilment the diverse needs of families , especially : staple food , food dishes , soap / cooking oil , sugar , coffee , snacks , electricity payment, water , education , health and social contributions
9.	Sources of information for handling mix farming	A variety of information is mainly characterized by an increase in farming with the use of mix aquaponic technology received from the following sources : <input type="checkbox"/> General Sudirman University researchers . <input type="checkbox"/> Extension of Department of Fisheries Purbalingga . <input type="checkbox"/> Fellow farmers farmers both from the local village and outside the village
10.	Social activity	All of the informants admitted that they actively participated in a variety of social activities that take place in village
11	Agricultural land ownership	Mayority of informant is still owned land itself. There are only a few people who need additional land for cultivate agricultural land , which is obtained by way of rent. In some cases, there is some informant who are work on the other land which is not owned but this land is owned by some one who are living in the other place.

Sources: To be analyse from primary data In the years of 2012

CONCLUSION

For achieving independency, rural communities is still needed a struggle. In the midst of weakness, there are socio economic dynamic. Mutually beneficial relationship for obtaining variety of material and non-material assistance among rural communities with various external parties take place. Rural community including farmers receive assistance in various forms, such as: the dissemination of aquaponic technology. In some cases, this will be helpful but next years will make accute dependency. The level of success of raising the existency depend on the farmers and regional government for enlarging rural community and its local institutions in which be build. Existence villagers always important to consider in aquaponic technology dissemination process. Perceptions and responses given the villagers have a strong influence on the success of technology dissemination aquaponics devoted to the welfare of farmers in rural residents.

SUGGESTIONS

Local resource potential turns out to also determine the direction of success aquaponics technology dissemination process. Social and economic functions aquaponic technology also be a consideration for prospective adopter aquaponic technology '. With dissemination characteristics of the existing aquaponics process in rural communities in the area of agro requires awareness and mentoring functions and benefits at an early stage. Potential awareness efforts are beginning initially through non-formal education, maintaining the process of change, limited adoption and eventually adoption.

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