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Adoption of Organic Vegetable Program Innovation in Organic Vegetable Village

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Abstract

The unused land management as the seeding place is a new innovation by the farmers. Alms house is the initiator of the organic village program idea in Ngemplak Sutan Village, Mojosongo, Jebres, Surakarta. Innovation adoption program is started in 2013 and the successful of the program in 2018. It is needed 5 years to change the people's mindsets to go organic farming. The aim of this research is to know how the process of innovation adoption program of organic vegetables in Ngemplak Sutan Village, Mojosongo, Jebres, Surakarta. The method which is used is qualitative research method since it emphasizes the direct observation and the data is analyzed by non-statistics. The data of this research comes from the primary source, that is deeply interviewed, while the secondary source comes from document, photo, video, and journal which is related with the research. This research uses interactive analyze data technique. The determination of the informant uses snowball sampling. The result of the research shows that the adoption process occurs through particular steps. On the knowledge step, it gives big impact on the decision of do the innovation adoption. This step can change the people's mindset so they feel interest to do adoption. Innovation adoption program also gives impact on healthy sector, education sector, and economy sector. The conclusion is the adoption process was slow. The education sector is being the determination of the way in adoption process. Experience and knowledge, and the impact which is felt will be important considerations.

Keywords: Adoption of Innovation, Organic Vegetables, Rumah Zakat

INTRODUCTION

Various innovations have been achieved to create a life that takes into account the welfare of society and the environment. One of the innovations that occur in agricultural technology. Agricultural technology innovation is one of the efforts to improve the quality of agricultural products themselves. One form of innovation in agricultural technology is the organic vegetable program. This organic vegetable program innovation is a form of decreasing the use of pesticide fertilizers, which can reduce the quality of rice fields. This program is also a solution for farmers who do not own land or lack land to carry out agricultural activities. This organic vegetable program also supports government programs in meeting nutritional adequacy rates. Agricultural innovation also has the aim of increasing the quality of agricultural production.

Agricultural development in Indonesia has been carried out for a long time, namely since the introduction of the green revolution. The green revolution represents the changes that have occurred in the agricultural sector, it can also be called a development program in the agricultural sector. Innovations in line with increasing population growth, thus requiring high food needs. This also has an impact on the agricultural land availability sector. This has led to the emergence of innovative organic vegetable programs. The Indonesian government showed special attention to agricultural and food development, so in 2001 the government launched a program *Go Organic 2010*. The aim of this program is not only to achieve food security, but also to make Indonesia one of the main organic producing countries in the world. Apart from having an impact on environmental sustainability, organic agriculture is also able to improve the economy of farmers because the selling price of organic products is more expensive in the market (Machmuddin, 2016).

Budiasa (2014) states that the organic farming system is a holistic agricultural system with the aim of production to improve the health of the agroecosystem. The main objective of the organic agriculture program is to provide agricultural products, especially foodstuffs that are safe for the health of producers and consumers and do not damage the environment. A healthy lifestyle requires assurance that agricultural product ingredients must be safe for consumption (food safety attributes), contain high nutrition (nutritional attributes), and are environmentally friendly (eco-labeling attributes). Agricultural production has increased quite rapidly due to the agricultural technology innovation strategy (Utami, Lestari, & Lestari, 2016).

Development in agriculture that is able to encourage or provide direction for reforming changes is referred to as innovattivenes. Mardikanto (2010) states that innovation is not just something new, but something that is considered new to be able to encourage renewal in society. Changes that occur in society start with innovation and the core of community development is the occurrence of social change towards a more advanced direction. The community experiences development in the social sector in several stages, namely: (1) the discovery or innovation stage, (2) the diffusion stage or new ideas, and (3) the consequence stage of the changes that occur. The discovery stage gives rise to new thoughts, then from the discovery it generates new ideas (diffusion) which are applied to society and will have an impact on change. Diffusion in agriculture has a very good influence on agricultural industry players (Guntoro, Rakhman, & Suranindyah,

Ngemplak Sutan village is one of the villages that runs this organic vegetable program. Until now this village is known as the Organic Vegetable Village. This success cannot be separated from the efforts that have been made by Anggota association of the Organic Vegetable Village Community Self-Help Group (KSM). The organic vegetable innovation program originated from the Rumah Zakat organization as the originator of the idea, which collaborated with the Solo Health Office through the Food Security Office (KKP).

The beginning of the formation of KSM only 20 members. This is due to the lack of understanding of residents about this innovative organic vegetable program. KSM's first step in running its program is planting vegetable seeds in the yard of each member's house. Together with the Health Office, KSM routinely holds outreach on the organic village program in the hope that residents will raise awareness to run this innovation program. After 3 years, KSM Kampung Sayur Organik succeeded in getting 80% of the residents to join the association. Currently, every resident's yard has been planted with various types of vegetables and fruit seeds with high nutritional value. The success of raising awareness through socialization forums and the consistency of KSM in providing direction are the keys to the successful implementation of this organic vegetable innovation program.

The initial stage of implementing this program is the clearing of unused land. The land which is owned by Ngemplak Sutan Village is used as the location for the initial nursery. With polly bag media, due to the absence of adequate agricultural land. KSM members also process household waste into natural fertilizer. Until now, the yard is used as a place for growing vegetables. This makes Ngemplak Sutan Village no longer dependent on agricultural land and is also free from pesticides that allow environmental destruction.

The success of Kampung Ngemplak Sutan is inseparable from the awareness of the community towards this innovative organic vegetable program. The community's enthusiasm for innovation is quite high, seen from land management to making their own organic fertilizer. The community has learned from the mistakes of the past that they are too dependent on agricultural land which is eroded every year by development and their habits in consuming foods that have not been tested for chemical content of fertilizers used by agricultural producers. Now that they know the benefits and apply this organic vegetable program, the community has been helped, both in environmental and economic conditions, from selling vegetables from their own gardens.

Previous research conducted by Oktariana and Thirtawati (2015) entitled Farmer Communication Strategies in Organic Rice Innovation Diffusion showed that communication strategies were carried out by utilizing rice farming experience to facilitate adoption. Collaborating with the government through pilot programs to increase knowledge and information regarding progress in farming.

Research entitled Farmers' Perceptions of Organic Vegetable Cultivation Technology in West Bandung Regency conducted by Rani Andriani Budi Kusumo, Anne Charina, Agriani Hermita Sadeli, and Gema Wibawa Mukti (2017) stated that farmers have a positive perception of the benefits of cultivating organic vegetables, this is due to suitability of cultivation technology with environmental sustainability as well as ease in the implementation of cultivation as well as adequate information support. Support from the government and stakeholders is also needed to increase motivation in developing organic agriculture.

Another research conducted by Wiratna (2019) entitled Diffusion of Organic Rice Innovations states that the success of the agricultural system innovation diffusion program is pursued through five stages, namely: 1. Knowledge Stage; 2. Invitation Stage (Persuation); 3. Stage of Termination (Decision); 4. The Implementation Stage; 5. Confirmation Stage. Innovations made in changing the conventional agricultural system to organic

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are considered to be very effective and have a positive impact on the economy so that they are able to drive the people's economy. In previous research, this type of research compared the stages through which each group participated in the innovation program. Meanwhile, in this study focuses on the KSM association

Organic Vegetable Village. Where KSM is the only forum for association in Ngemplak Sutan Village. Through this KSM, the process of adopting innovation goes through the stages with each stage having different processes and obstacles. In this study, researchers used a problem formulation, namely how is the process of adopting the organic vegetable program innovation in Kampung Ngemplak Sutan, Mojosongo, Jebres, Surakarta? While the purpose of this research is that the researcher wants to know how the process of adopting the organic vegetable program innovation in Ngemplak Sutan Village, Mojosongo, Jebres, Surakarta.

Innovation

Organic agriculture is one option that can be made towards sustainable agriculture. Through diffusion by introducing and encouraging conventional farmers to turn to organic farmers. The adoption and diffusion of agricultural innovation is also influenced by several factors, such as market opportunities in selling organic products, the role of mentoring for organic farmers in providing guidance, and farmer attitudes in making decisions to adopt agricultural innovations (Peter Kaufman, Sigid Staglab, 2009).

Innovation is a process to reduce dependence on the role of government, because rural communities are increasingly empowered and creative in developing innovation. Innovation is an idea, practice, or object that is considered new by some individuals or community groups. It all depends on how each individual or group feels about these ideas, practices, or objects (Rahmawati, 2018).

The presence of communication channels is intended to convey and explain information to the general public. Communication aims to create an innovation or new idea that is conveyed to the wider community. Rogres (in Rahmawati, 2018) states that innovation is carried out in several stages, namely:

1. The knowledge stage is intended to inform and explain the concept of innovation to farmers that will be carried out by experts or extension officers from the local government.
2. The persuasion stage, where farmers gain knowledge about innovations through field practice. Then the farmers practice, assess, and consider the information and innovations that have been offered.
3. The decision stage, the stage for farmers to make a decision on a choice to use the innovation that has been made or reject the innovation being practiced. At this stage the farmer provides reasons and considerations according to the data in the field to accept or reject. Farmers will receive when they have benefited from the innovation program.
4. The confirmation stage is the time when farmers exchange ideas and experiences as farmers who run innovation programs with farmers who have not implemented innovation. This stage will produce an evaluation of the success of the innovation program, so that the farmers themselves will make the innovations they do.
5. The adoption stage, where farmers are convinced of the innovation program and implement innovation. At this stage farmers also invite other farmers to participate in implementing innovations. The adoption stage is influenced by the farmer's assessment, namely about risks, availability of materials, facilities, and partnerships.

A decision to make a change from knowing only to being aware of and changing attitudes to implement new ideas takes time and is also influenced by various factors. Such as the condition of farmers, environmental conditions, and characteristics of the innovations made. One of the benefits of implementing innovation in a group is that it provides new resources and strength for the creation of social welfare, it can be ascertained that the incorporation of members into a group is an effort to improve income, not just following the behavior of other community members (Drucker in Sasmito, 2016).

Acceptance of innovation is not just knowing, but actually implementing or applying it properly and living it in life and farming. Acceptance of innovation can usually be observed directly or indirectly, as a reflection of changes in attitudes, knowledge and skills (Mardikanto in Noviyanti, 2017).

METHOD

This type of research uses a qualitative descriptive. According to Pujileksono (2015) qualitative descriptive is a research process based on a social phenomenon that occurs and is described descriptively.

Data collection techniques in this study used in-depth interviews with several informants who were the subjects. The type of interview used by the researcher is an unstructured interview where the researcher is not fixated on interview guidelines that are structured systematically and coherently in data collection (Sunyono, 2011). The results of the interview are primary data, and the secondary data of this study come from journals, documentation, photos , videos that are relevant to the object of research.

This study also uses a snowball sampling technique, where this technique is like a snowball rolling from the top of a mountain to a valley whose size continues to increase, initially in small amounts, it grows more and more and this process ends if the researcher feels the data collected is saturated (Kriyantono, 2006) . Key informants will help find the next informant. With this method, the informant is considered the person who knows best about the data studied (Pujileksono, 2015). The key informant or informant 1 who was the subject of this study was Pak Paryanto, the head of the KSM (Self-Help Group) Organic Vegetable Village association.

To test the validity of the data, the examiner used triangulation of data sources. Triangulation of data sources is a way to check and compare the information obtained with other sources. After that each resource will provide different results and will provide an insight into the phenomenon being researched (Pujileksono, 2015).

Because the required data was still lacking, the researchers returned to look for the next informant. Researchers received suggestions from informant 1 regarding people who were considered to know about the process of adopting innovation in Ngemplak Sutan Village. From informant 1, the second informant was found, namely a member of KSM Kampung Sayur Organik, namely Ibu Asih who has been a member of KSM from the beginning of its formation.

Meanwhile, to analyze the data, researchers used data analysis techniques with the Miles and Huberman method. This analysis technique is carried out continuously until it is complete until the data is saturated (Pujileksono, 2015). This analysis goes through 3 stages, the first is data reduction by summarizing and selecting the important things. Second, presenting the data by displaying power in the form of a short explanation so that it is easy to understand. Third, conclusions and verification are described findings that are not yet clear at first. Conclusions are drawn from the compilation of the results of interviews that have been obtained as well as new findings that have never existed before being put together as a conclusion in this study (Aan, 2013).

RESULT AND DISCUSSION

Puspo Samito (2016) conducted a research on the adoption of the Etawa cross breed goat (PE) cultivation innovation, the knowledge stage and the persuasion stage did not have a significant impact. This happens because the people who will be the adopters have a low educational background. This causes the decision-making stage to be slow, educated people tend to make decisions quickly compared to those with low education. The innovation adoption process runs from 2010 to 2016 until the end of 2016, group members have joined the Etawa goat innovation adoption program.

Rumah Zakat as the owner of the idea or as the initiator of the innovation adoption program in Ngemplak Sutan Village. To carry out this idea, Rumah Zakat invited the chairman of Rt Kampung Ngemplak Sutan, Mr. Paryanto to join in carrying out this idea. In 2013 an organic village training was started, together with 20 people from Pak Paryanto's own family and neighbors. After running for 5 years, to be precise in 2018 the residents of Kampung Ngemplak Sutan 80% have become members of the KSM itself, which is around 96 people. The hope in the future is that all citizens have become adopters of this innovation program.

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Figure 1. Vegetables in front of home

From Figure 1 it can be seen that residents have implemented an innovation, namely the use of the home page as a place for vegetable seeds to grow. Also the arrangement of the room to make it look more beautiful and neat so that it is comfortable on the eyes. This shows that the innovation process also has an impact on better spatial governance.

Figure 2. Unused land as a place for hatcheries.

Figure 2 shows limited land use and unused land as a place for hatcheries. Utilization of unused land is one of the goals of this innovation adoption program. People who do not own gardens can take advantage of the available space. The process of adopting innovation invites people to think creatively and innovatively to solve existing problems.

In this research, namely the knowledge stage in which the KSM Team together with the Environmental Service, Food Security Office, and Rumah Zakat need to do intelligence. The steps taken are very precise. Through a regular meeting forum discussing the objectives and implementation of the organic village program in order to achieve the main goal. The initial process is the key to the successful adoption of new ideas and ideas. At this stage, it must be done seriously, getting closer to residents to attract sympathy. Through socialization forums with an interpersonal approach it makes it easier to build good relationships between stakeholders and residents.

Information delivery at this stage is very detailed, counseling is carried out regularly twice a month. To attract residents' attention, the extension team also showed interesting videos about villages that have successfully run organic farming programs. With the hope that the community will be motivated to participate in running this organic village program. No less important is the mentoring system carried out by the KSM team.

The KSM team also together with stakeholders apart from providing counseling, also invited residents to practice directly. This training aims to make the people of Ngemplak Sutan Village feel that if they have adopted the innovation later, what steps must be taken. Detailed explanations, using audio video media, as well as distributing leaflets were the right tricks used by the KSM Kampung Sayur Organik team in attracting residents'

interest at least to participate in this counseling. During the implementation of the socialization, residents were very enthusiastic about the benefits that would be obtained from the organic village program. The KSM team enthusiastically explained what benefits would be obtained by adopting this program.

Research conducted by Nur Elisa Faizaty on the Adoption of Saturated Soybean Cultivation Technology in 2016 stated that the decision of farmers to join this innovation adoption program was because they felt challenged by technology or new ideas that they had never encountered. This research states that the background of a farmer does not have a big influence on formal education. These farmers are moved based on strong motivation and non-formal education. These farmers are attracted to adoption because of a certain degree of complexity and the possibility of successful or unsuccessful attempts. Basically they are just ordinary farmers, whether they are following the adoption program or not. If they fail, they still have their own advantages.

After knowing what the goals and benefits were obtained from the adoption of this innovation, the residents of Ngemplak Sutan Village were faced with two choices. Adopting the organic village program or not participating in the innovation adoption program. Considerations based on the experience and knowledge that residents already have, as well as advantages and disadvantages are taken into consideration. This is relevant to research conducted by Kharisma Ayu Febriana on Communication in the Diffusion of Water Hyacinth Craft Innovation in 2016, saying that the innovation decision process depends on the practical experience of water hyacinth craftsmen, the level of knowledge of benefits, and the extent to which information is disseminated. The persuasion stage with an interpersonal approach is more effective. So that each stage runs smoothly

One of the advantages of this innovation program is the citizens' economy. By seriously participating in this program the community will be able to get additional income from the sale of planted vegetable seeds. However, the existing obstacles are also taken into consideration. The initial failure to implement this innovative system was also high. This happened because the residents of Ngemplak Sutan Village did not have a farmer background. These two things are a heavy consideration for the residents of Ngemplak Sutan Village to participate in adopting the organic village program.

As time went on, the residents of Ngemplak Sutan Village were willing to accept this innovative organic village program. In line with research by Hendra Darusalam in 2017 entitled The Adoption Process of Marine Fish-Based Organic Liquid Fertilizer Innovation on Rice Commodities in Banyuwangi Regency, it was stated that not all farmers wanted to adopt. This happens because farmers adjust to socio-economic conditions and pay attention to the suitability and ease of adoption. For two years being guided by stakeholders and regularly participating in counseling, finally 80% of the residents of Kampung Ngemplak Sutan have joined. They have succeeded in understanding and understanding the objectives of the organic village innovation program. It was well marked by making the decision to join. Now the benefits that are being felt are changes in the quality of health, changing environmental conditions, as well as new sources of income. The innovation adoption program has changed people's mindset to be more developed and also understands what has not been understood so far.

CONCLUSION

The adoption of innovation is needed as a solution to the problems that exist today. In the agricultural sector, the organic village program is one of the programs to solve the problem of limited agricultural land, increase nutritional needs, and help the economy. The innovation adoption stage occurs in several stages, namely the knowledge stage, the persuasion stage, the termination stage, the confirmation stage, and the adoption stage. Each stage gives a different result. For the residents of Kampung Ngemplak Sutan, the knowledge stage is the basis for the success of this organic vegetable village program.

At this stage the counseling team, namely the KSM Team, the Environmental Service, the Solo Food Security Office, and also Rumah Zakat as companion participated in providing education. Facing different backgrounds of community members, the results show that the educational factor determines whether this stage is fast or slow. Technological developments also affect, with the media of photos, videos, and the YouTube platform making it easier to convey understanding of the organic village program. Extension methods and field practice are key to the interest of community members in participating in extension. The enthusiasm of the residents increased after knowing that this program was also able to increase income.

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The confirmation stage being the starting point for successful adoption can be seen. At this stage, the residents of Ngemplak Sutan Village began to show interest. Like starting to change the yard given the potted plant. Better home page arrangement. Almost every house has its own garden. Sharing experiences, the process of exchanging knowledge between farmers becomes a moment where knowledge of innovation adoption has gone well. As a sign of the success of the knowledge stage as one of the functions of communication, namely the delivery of a message from the sender, namely the counseling team to the message recipient, namely the residents of the Ngemplak Sutan Village.

However, not all residents have joined the organic village program. They think the process is too long, also takes time to relearn. Also uncertain income is a consideration. The educational process is needed more by involving increasingly advanced technological developments. Educational background is a factor in the existence of many points of view in making decisions for adoption.

The process of adopting this innovation has been slow. Judging from the beginning of the formation in 2013, it started with 20 people. After 5 years, the number of KSM members is 96 out of 120 residents. Sooner or later the adoption process is determined by the understanding factor of each individual. People who fail to try must also repeat the stages from the beginning, this is one of the success factors seen from the level of understanding. Educational background also affects the speed at which messages are conveyed. Most of the residents with an education background from junior high to high school, become the benchmark for the level of understanding. This underlies the KSM to provide socialization once a week every 2 weeks. With the hope that the message will be delivered quickly and citizens will easily follow every step of the adoption of this innovation.

Researchers realize that in this study there are still many shortcomings and limitations. So that the researcher's suggestion for the next is that research focuses on the stage of deciding the adoption because it is felt that there are many other determining factors and can conduct research with other teroi so that the results are more optimal.

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