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Community Economic Resilience Through Organic Waste Management in Jatisura, Indramayu Regency, West Java

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Abstract

To realize an increase in people's living standards, and to overcome poverty and unemployment, it is necessary to collaborate with the government, universities and the community. The Regional Government of Indramayu Regency in collaboration with the Jakarta Veterans National Development University collaborates in research and community service. In this case, the selected village is Jatisura village as the centre for implementing community service activities Jatisura Village is a mango-producing village in Indramayu which has problems with waste management. Garbage as household, market and industrial waste has become a national problem because it can pollute the environment and public health if no one manages it professionally. The target of this activity is organic waste management. The purpose of this activity is to make waste a resource that has economic value that can increase the income of the Jatisura village community. The implementation method carried out consists of several stages. Planning and preparation stage; Partner analysis stage; Stages of implementation and assistance; Monitoring and evaluation stage. The results of this activity indicate that the average participant understands the process of managing organic waste into Local Microorganisms (MOL) products and using it as a substitute for chemical fertilizers. Service activities are not only for the benefit of lecturers at universities but for the benefit of the local village community and generally villages in Indramayu Regency.

Keywords: Economic Resilience, community, Local Microorganisms

INTRODUCTION

The importance of community economic resilience with community empowerment efforts to improve quality of life, independence, and economic welfare requires assistance and involvement of local governments and various parties including universities. To realize an increase in people's living standards, to overcome poverty and unemployment, namely by cooperation in the form of community service. As the scale of development priorities in Indramayu, namely increasing poverty reduction efforts through increasing resources, they are able to independently improve the economy and competitiveness through the management of regional superior potential.

Indramayu Regency is one of the regencies in West Java Province. Administratively, Indramayu Regency has an area of 209,942 km from the area of West Java Province which is divided into 31 sub-districts, 8 sub-districts and 309 villages, 1689 RW and 6,202 RT. (BPS, 2022). Indramayu Regency is known as one of the rice barns and agricultural centres listed in the top 10 contributors to West Java's GRDP. In the plantation sector, one of the main products is mango,

This community service partner has chosen the village of Jatisura. The village was formed de facto in 1982 and de jure 1985. Administratively, Jatisura Village is located in Cikedung District, Indramayu Regency. Jatisura Village is divided into 5 Hamlets with 5 RW and 32 RT. The population of Jatisura Village as of May 2022, amounted to 5080 people consisting of 2,373 men and 2,707 women. Judging from the field of work or livelihood, about 13 people are Civil Servants (TNI/POLRI/PNS), 54 are private employees, 160 are traders, 584 people are farmers, 1625 are farm labourers, 14 are small industries, 1855 are students or college students, 3 are retirees, and the others are 742 (Sumber Kuwu Jatisura, 2022).

Jatisura village is known as a mango-producing village because mango plantations in this village reach 343.9 ha consisting of gedong gincu, sweet fragrant, cengkir, and elephant mangoes. In the field of tourism, Jatisura village also has several potentials that support tourism destinations, namely rice fields, livestock, canting wells, great-grandfather sand, mango plantations, agrimania agro-tourism, sugarcane plantations and deep good swamps. Currently, many Micro, Small and Medium Enterprises (MSMEs) have started to emerge which manage mangoes in a variety of foods and beverages. Of course it has very high competitiveness and economic value and can even be exported abroad. The development of mango harvest from year to year has increased significantly,

The priority problems faced by partners are the first problem of waste management/management, Jatisura Village does not yet have a Final Disposal Site (TPA), and the scattered waste of course has fatal consequences, namely environmental pollution disrupting the cleanliness and health of its citizens. The problem of waste originating not only from household waste, markets, schools, offices, and hospitals but now the emergence of home industries and MSMEs that carry out food processing production activities, then a new problem arises, namely the problem of waste (Mulasari, S. A, 2012). Both women as retired migrant workers can be empowered to support the family's economic resilience, having a dual role that can carry out its dual role, namely towards the family as well as the community.

The concept of community service activities using organic waste processing methods with the concept of local Microorganisms (MOL). Microorganisms are liquids made from various natural resources available in the local area. MOL contains macro and micro nutrients and also contains microbes that have the potential as organic matter reformers, growth stimulants and as plant pest control agents. Based on the content contained in the MOL, the MOL can be used as a decomposer, biological fertilizer, and as organic plastic (Fitriani, M. S, 2015). Similarly, MOL is a liquid made from natural ingredients that is preferred as a medium for living and developing microorganisms that are useful for accelerating the destruction of organic materials or as decomposers and as activators or additional nutrients for plants that are intentionally developed from microorganisms that are in the place. (Protected, 2015). The materials used in the manufacture of MOL generally come from materials that are no longer useful. The type of MOL used comes from simple materials that are commonly found at the household level, including mixed moles (containing cow dung, bran, molasses, EM4, `and water), pineapple tape mole, stale rice mole, and sludge mole. The raw materials for making MOL use fruit types such as papaya, banana, tomato and pineapple (Nurullita, U & Budiyono, 2012).

The purpose of this community service is to make waste a resource that has economic value that can increase the income of the people of Jatisura Village (PERPUB Indramayu No. 44.1 of 2018). Empowering women (housewives) to become strong and independent entrepreneurs, creating new jobs so as to reduce the unemployment rate in Jatisura Village.

METHOD

The method of implementing this community service activity is in the form of a combination of analytical methods carried out jointly between the service team and partners, namely residents of Jatisura Village, Cikedung District, which consists of 5 Hamlets with 5 RW and 32 RT. Participants in this community service activity are prioritized as housewives who represent each of the Neighborhood Units (RT), and a working group is formed. This activity method uses a participatory method, this method is known as the PLA (Participatory Learning and Action) method, which is a community empowerment method consisting of a learning process about a topic, formerly known as learning while working (learning by doing),

Indramayu Regent Regulation (PERBUB) number 44.1 of 2018 concerning the handling of waste problems, it can be concluded that in general it aims to realize an environmentally sound lifestyle, increase the participation of the community and business actors to actively

reduce/handle environmentally sound waste and make waste as a waste product economic resources.

Problem solving with participatory learning methods or PLA, this method is used to help partners overcome problems related to lack of understanding in waste management, especially organic waste. Organic waste can be processed into a product that has economic value and increases family income.

The implementation method used in the service consists of 4 (four);

- Preparation stage, the planning carried out is to design and determine the object that is the target and purpose of this community service. Research activities whose main sources of data and information are obtained from respondents as research samples by means of interviews, distributing questionnaires to obtain data and information. A survey conducted to determine the willingness and participation of partners to provide permits and statements as partners. Situation analysis is needed because the program must be implemented based on data (evidence based).
- Analysis stage, partners participate in the form of time and knowledge related to waste management in accordance with the concept of Local Microorganisms (MOL). The main ingredients of MOL consist of several components, namely carbohydrates, glucose, and sources of microorganisms;
- Training and Mentoring Phase, the form of activities in the training is by giving lectures in the form of materials ranging from introduction to waste management, types of waste, theories and concepts of Microorganisms (MOL) as well as material about theories and concepts of entrepreneurship. In the lecture material, materials and tools that will be used in the process of processing waste using the MOL method are introduced. The use of the PLA method in this training consists of soft skills and hard skills. Soft skills are abilities possessed by individuals naturally which include intelligence, both emotional and social, communicating or interacting with other individuals, and the like. To make the mentoring successful, the facilitator uses a participatory approach strategy, in order to convince the public more about what will be done so that it can bring up potentials that they have not realized. In addition, the assistants here have a position as partners for the community. The community itself is the main subject or actor in this empowerment process.
- Monitoring and Evaluation Phase. Monitoring activities are more focused on activities that are being carried out by digging to obtain information on a regular basis based on certain indicators, with the aim of knowing whether ongoing activities are in accordance with agreed plans and procedures. Monitoring indicators cover the essence of activities and targets set in program planning. Evaluation of the results (product), is carried out with the aim of identifying and assessing the results achieved on target in the short term

RESULTS

The community service activity (Abdimas) in Jatisura Village, Cikedung District, Indramayu Regency with the theme "Community Economic Resilience Through Waste Management in Jatisura Village" begins with the preparation stage by conducting a site survey at the Jatisura village office. and seek information about the state of Jatisura Village. In this case, the team conducted interviews with the head of Jatisura village called Kuwu and the village staff.

The majority of Jatisura Village work as farmers, and the enthusiasm of the village community to farm is very high even though the agricultural land in Jatiura village is limited, the surrounding community continues to farm on land owned by other people as farmer labourers. The problem of straw waste and fruit waste from Jatisura Village farmers can be used as organic fertilizer. The organic fertilizer can be used as the main ingredient for making Local Micro Organisms (MOL). In the analysis stage, the Abdimas team invited and learned directly from experts in the manufacture of MOL, starting from the materials, equipment to the manufacturing process and the benefits obtained from MOL.

The next stage is the stage of training and mentoring in the management of organic waste into MOL. The Abdimas team is assisted by students and college students. In the implementation of this community service activity, the participants are mothers who are members of the Family Welfare Empowerment (PKK) chaired by the wife of the Jatisura village head and fathers who also want to join the training. The results of the questionnaire data collection for the training participants and MOL training activities are as table 1.

Table 1. Characteristics of Respondents

Characteristics	Frequency (n)	Percent (%)
Age (Years)		
20 - 35	12	48%
36 - 50	13	52%
Total		**100%**
Gender		
Man	7	28%
Woman	18	72%
Total		**100%**
Job status		
Housewife	18	72%
Working	6	6%
Doesn't work	1	4%
Total		**100%**

Based on Table 1, characteristics of community service participants in Jatisura Village, Cikedung District, Indramayu Regency, shows that the age of the majority of the participants is in the 36-50 year age range by 52%. The gender of the participants is the majority of women with a percentage of 72%. This is because our target participants are women for Family Welfare Empowerment (PKK). The employment status of the participants is mostly housewives with a percentage of 72%.

DISCUSSION

Based on the results of the post-test (Table 1.2) that the majority of the training participants understand the steps of making and the benefits of MOL. Then the participants also understood what equipment was needed and the materials and steps for making MOL. However, participants did not fully understand the benefits of MOL in the economic aspect.

Table 2. Posttest Results

No	Statement List	Indication					Total
		Very Poor	Not really understand	Neutral	Understand	Very Understand	
1	Understand the use of local microorganisms (MOL)	4	2	1	14	4	**25**

2	Knowing the equipment needed in making MOL	3	2	2	14	4	**25**
3	Knowing the materials that can be used to make MOL	0	3	0	18	4	**25**
4	Understand how to make local microorganism (MOL)	1	5	2	12	5	**25**
5	Knowing MOL has many benefits, one of which is from the economic aspect	2	6	3	9	5	**25**

The final stage of the activity is monitoring and evaluation, after the training is complete, the Abdimas team creates a WhatsApp Group with participants to monitor the progress of the MOL that was created during the training. The final results of MOL are packaged in small bottles and adjusted using a simple label according to the main ingredients used. The results of the MOL products are as follows:

CONCLUSIONS AND RECOMMENDATIONS

The implementation of community service in the form of training and assistance in the manufacture of Local Microorganisms (MOL) to utilize waste in Jatisura Village, Cikedung District, Indramayu Regency has economic value, activities run well and smoothly. The training carried out are:

- Outreach on Local Microorganisms
- Practice of making Local Microorganisms
- Supervision and assistance in the process of making Local Microorganisms
- Local Microorganism Packaging

Based on the activities that have been carried out by lecturers and students of the Sharia Economics Study Program, Faculty of Economics and Business, UPN Veterans Jakarta, which was held in the village office hall of Jatisura Village, it is hoped that it will be useful for improving the quality and quality of all parties, both lecturers, students and the community around Jatisura Village. We hope that the community should understand that service activities are not only for the benefit of Lecturers at Higher Education but for the interests of the local village community and generally villages in Indramayu Regency. Lecturers are only a motivation so that village communities can use waste waste into useful materials such as fertilizer for rice fields and fields.

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APPENDIX

Figure 1. Coordination and Discussion with Jatisura Village Head

Figure 2. Practice making MOL with Experts

Figure 3. Documentation of MOL training activities

Figure 4. Final Products of Local Microorganisms