

Diversification of Oyster Mushroom Products to Improve the Economy and Household Food Security

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ABSTRACT

Oyster mushroom is one of the important agricultural commodities cultivated by the community, especially in Kondang Jaya village, East Karawang District, Karawang Regency, West Java. In the hamlet of Griya Kondang Asri, Kondang Jaya village, oyster mushroom cultivation is carried out to empower women who are accommodated by the Berkah Farmer Women Group which has 20 local MSME groups. However, the implementation of mushroom cultivation is still not optimal because there are still many problems related to cultivation and there is no innovation in the management of oyster mushroom products, so people only sell oyster mushrooms in a fresh condition without packaging. Therefore, this service must be carried out. This activity aims to provide insight to the group of women farmers about mastering mushroom cultivation techniques, improving skills in creating and innovating nuggets and mushroom chips, as well as skills in making packaging designs, to increase the selling value of mushroom cultivation products of the Women Farmers Group. This activity was carried out using the Participatory Learning and Action (PLA) method. The result of the implementation of the service is an increase in the knowledge and skills of farmer group partners in utilizing mushroom crops in the diversification of products with high economic value.

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INTRODUCTION

Oyster mushrooms are one of the wood mushrooms that can be consumed, including the Basidiomycota group and the class Homobasidiomycetes. Mushrooms contain 19-35 percent higher protein than protein in rice (7.38%) and wheat (13.2%). There are 72% essential amino acids and unsaturated fats and fiber content ranging from 7.4% to 24.6 percent good for digestion, making it suitable for dieters. (Rosmiah et al., 2020)

Griya Kondang Asri Hamlet is one of the hamlets that cultivates oyster mushrooms through the Berkah Farmer Women Group which has 20 members of women farmers. Kondang Asri Hamlet is located in Kondang Jaya village, East Karawang District, Karawang Regency, West Java. Kondang Jaya Village is a village located in an urban area, in addition to the Farmer Women Group, Kondang Jaya Village also has many local MSME groups, but they have not developed optimally.

The population in Griya Kondang Asri Hamlet consists of 1538 heads of families and is the highest number of families out of 22 other hamlets. The average occupation of residents of the female gender in Griya Kondang Asri Hamlet is as a housewife. Housewives are the key in every family to manage the sufficiency of each household's economic food needs. The consumption of food needs continues to increase but is not accompanied by an increase in the area of agricultural land in this region. The problem of land conversion continues to occur, so agricultural activities in urban areas, especially in Kondang Jaya Village, continue to decline. This has implications for meeting the food needs of rural communities in urban areas. (Tenda et al., 2020) .

The Berkah Farmer Women Group is the only group of farmer women who manage oyster mushroom cultivation, the agricultural potential that continues to be developed has the opportunity to meet food needs, especially in Kondang Jaya Village. The management of oyster mushroom cultivation is still not optimal, because many oyster mushroom badlok do not grow, this is because Human Resources do not have knowledge and skills in oyster mushroom cultivation techniques. The Farmer Women Group consists of 20 women and their job is as a household and MSME actors. The processed products produced have the potential to develop various processed oyster mushroom products as MSME products that can be developed. However, until now the processed products produced are still not optimal, because they are only sold in fresh form and processed without packaging, this can be seen from the lack of packaging such as mushroom nugget products, and labels and the ability to market products through digital. (Asmarita et al., 2021)

Oyster mushrooms are an important agricultural commodity in Kondang Jaya Village, but the implementation of mushroom cultivation is still not optimal, this can be seen from various mushroom cultivation activities in the Berkah Farmer Group today which has many cultivation problems such as declining mushroom yields, many badlok that die and the perishable mushroom commodities produced. The lack of knowledge of members of the farmer women's group in oyster mushroom cultivation makes the mushroom farming that is carried out many problems. In addition, the mushroom commodity products produced today are only sold in fresh form or processed into products that are sold without packaging.

The lack of human resource ability to knowledge and technology of mushroom processing makes farmer women groups not utilize the mushroom commodity harvest optimally. In addition, the ability of women farmers to manage agricultural businesses is also still low and many farmers do not understand good financial management. In addition, the mastery of digital marketing is still low, resulting in low marketing of the products produced. This makes the oyster mushroom farming business in the farmer women group not able to develop optimally.

This community service activity aims to improve farmers' knowledge and skills in mushroom cultivation techniques as well as skills in utilizing oyster mushroom crops through product diversification processing,

increasing local food security and product economic value, and improving the community economy in Kondang Jaya Village. The focus of this service is to overcome low post-harvest production, farming management management, and marketing of mushroom commodity products.

METHOD

The implementation of this community service uses the Participatory Learning and Action (PLA) method. The reason for using this method is to approach techniques through learning and participatory practice. Through Participatory Learning and Action, it is hoped that the public can understand the knowledge and technology provided and be able to plan, carry out product processing, and market their products to increase the income and economy of partners. This method is carried out by providing training and direct practice in the implementation process of program materials. (Darmawan et al., 2020) .

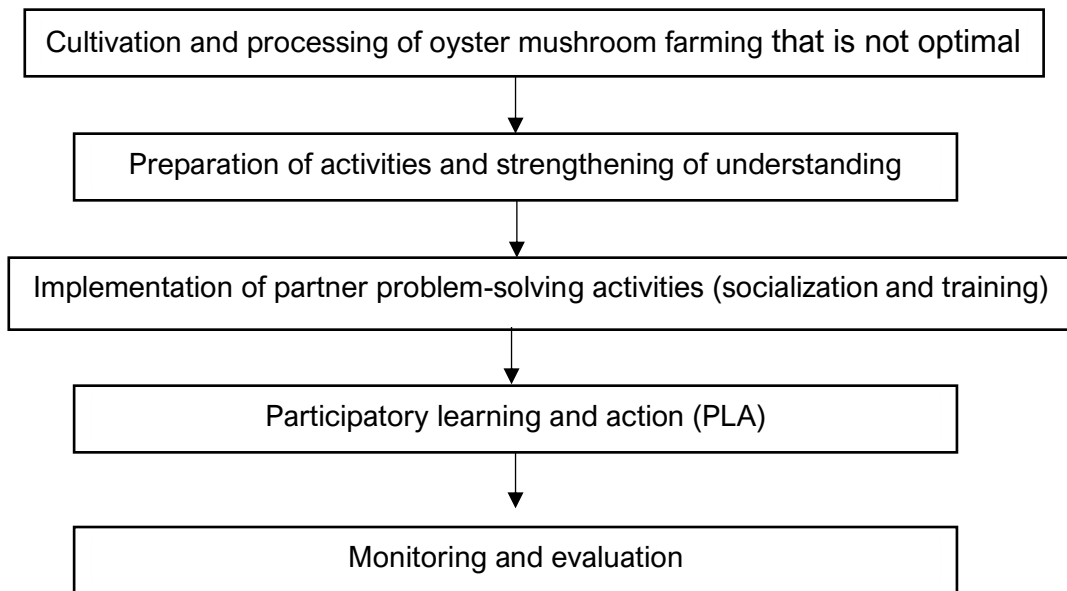


FIGURE 1. Research Flow Chart

The implementation of the service begins with the preparation stage. The steps to prepare for the activity include strengthening understanding related to the perception of the implementation of the program that will be carried out by the team of lecturers and students, as well as preparing materials and tools that will be used in the implementation of this activity.

The next stage is the implementation of partner problem-solving activities. At this stage, socialization was first carried out to convey service programs and activities. The socialization activity is more emphasized on providing understanding and understanding to the community about the importance of this program related to efforts to overcome the main problems of partners, namely cultivation and technology of processing oyster mushroom products into products to develop the diversification of processed products as a strengthening of the economy and household food security in Kondang Jaya Village.

The implementation of the training was carried out as an effort to solve the problems owned by partners by providing briefings on business management and financial reporting, digital marketing, manufacturing processed products, and attractive packaging and practices for making processed products. Furthermore, to improve the competence in product processing of partners to adapt to technology, partners are also required to improve digital marketing knowledge and skills. To provide ease of using the method, in this section, the method used is participatory learning and action. The involvement of partners with the community service activity team, both lecturers and students, in this activity, starts from planning processed products, carrying out training and product manufacturing practices, and packaging.

Monitoring and evaluation activities were carried out 3 times. In its implementation, monitoring and evaluating the implementation of activities through various aspects. The aspects evaluated include community response, activity implementation activities, and mastery of partner knowledge and skills which are formulated in two success criteria, namely output and outcome. The first evaluation was carried out to measure basic knowledge and mastery in the implementation of the program, the second evaluation was carried out during the implementation of the training to measure mastery of technology and technical skills. The third evaluation was carried out to measure the ability to improve the skills of partners in carrying out all activities. The success of the program implementation if $>85\%$ needs further improvements and assistance. The fourth evaluation was carried out to ensure the success of the implementation of the program by increasing the competence of partners by $>85\%$.

RESULTS AND DISCUSSION

The implementation of the service is carried out in several stages, including by holding discussions with partners of the farmer women group in the hamlet of Griya Kondang Asri, Kondang Jaya village. Joint discussions were held to identify problems faced by partners, discuss solutions, and the implementation of service activities carried out. The results of problem identification through joint discussions resulted in several problems, including technical problems in mushroom cultivation, problems in handling oyster mushroom commodity crops, problems in crop processing technology, business management, product manufacturing, and product packaging as well as marketing oyster mushroom products. Meanwhile, Rahmawati (2019) stated that internal factors such as susceptibility to pests and diseases, lack of capital, production instability and price instability caused oyster mushroom cultivation to be not optimal.



FIGURE 2. Discussion with PKM Team and Women Farmer Group Partners

Socialization in the implementation of the training was carried out jointly by the PKM team and students. The implementation of socialization was carried out with a series of activities, namely providing management and digital marketing materials. Business management material is important to be given to partners of the Blessing Farmer Women group, this is knowledge and skill improvement for the farmer women group in managing their business. Improving business management skills is important for farmer-women groups to develop businesses to be run. (Ghufroni et al., 2020).

Business management and digital marketing are important for women farmer groups. Digital marketing has an impact on the sales activities of every business run by the community. Through the use of digital, it can increase product marketing efficiency (See also Archives, 2023) (Khumaira & Nugraha, 2024).



FIGURE 3. Implementation of Service in Kondangjaya Village

The implementation of product manufacturing training is carried out by providing training in making oyster mushroom product diversification, including oyster mushroom chips and mushroom nuggets. The manufacture of oyster mushroom chips and nuggets is made using materials and tools that have been provided by the PKM implementation team. The manufacture of processed products can increase the added value and economy of the product. The manufacture of processed products can increase the added value of products (Yusiana, 2018) (Febrianti et al., 2023).



FIGURE 4. Product Diversification Manufacturing Training

Processing mushrooms into products that have high economic value has an impact on increasing motivation for farmer-women groups to optimize the yield of cultivated oyster mushrooms. This is because learning to improve skills is very important to increase community motivation in improving the processing of agricultural products. The making of packaging and packing labels was also conveyed at the implementation of the training. This can improve the skills of farmer groups and the community in Kondangjaya Village to develop various processed oyster mushroom products so that they can have high economic value and help increase farmers' income. Product packaging is important to increase the economic value of products (Mulyaningsih et al., 2021) (Nabila et al., 2023).



FIGURE 5. Mushroom Chips Product Packaging

The implementation of community service is not limited to socialization and training, but also assistance to farmer women groups to provide direct briefing and consultation related to product manufacturing to marketing. The benefits of the implementation of this service were felt by all members of the Blessing Farmer Women group and the entire community in Kondangjaya Village. The implementation of community service is supported by the entire village government, this is a motivation to develop various diversification of mushroom products by farmer women groups. The benefits of the implementation obtained from the results of this service are the improvement of the skills of farmer group partners and the increase in the economic value of oyster mushroom products.

CONCLUSION

The conclusion of the implementation of the results of the service from the description of the background and results includes:

- Increasing the knowledge and skills of partners, namely farmer women groups in utilizing mushroom crops into product diversification with high economic value.
- Increasing the knowledge and skills of farmer women group partners in diversifying products, namely oyster mushroom chips and oyster mushroom nuggets.

REFERENCES

- Asmarita, Yulyana, E., & Aryani, L. (2021). Gallery of micro, small, and medium enterprises. *Journal of Management*, 13(3), 396–399.
- Darmawan, D., Alamsyah, T. P., & Rosmilawati, I. (2020). Participatory Learning and Action to Foster Quality of Life in the Hope Family Group in Serang City. *Journal of Nonformal Education and Community Empowerment*, 4(2), 160–169. <https://doi.org/10.15294/pls.v4i2.41400>
- Febrianti, S., Dipokusumo, B., & Nursan Muhammad. (2023). Analysis of the Added Value of Soybean-Based Agro-Industrial Products in Alas District, Sumbawa Regency. *Agrimansion*, 24(2).
- Ghufroni, A., Zakki, N., & Wijaya, N. Q. (2020). Management of Business Management and Electronic Marketing "Brown Sugar Business Actors in Grujungan Village, Gapura District". *Abdiraja Journal*, 3(2), 6–9.
- Hendro, J., & Arlinda, S. (2023). The Application of Digital Marketing as a Means of Promoting MSME Products in the Cilincing District Area. *STEI Journal of Management*, 06(02), 31–37.
- Khumaira, N. A., & Nugraha, I. (2024). Analysis of the effectiveness of digital marketing with the marketing funnel method on Graha Office sales. *Journal of Commerce Education*, 12(1), 27–34.
- Mulyaningsih, T., Ratwianingsih, L., Hakim, A. R., & Mulyadi. (2021). *Training on Digitalization and Management of Traditional Halal Food MSME Products in Sukoharjo*. Strong Journal. 03(2). Pages 83-88
- Nabila, S. U., Jamil, H. S., Azizah, P., & Lampung, I. (2023). Implementation of Packaging Strategy to Increase Competitiveness of MSME Actors in Bunut Pesawaran Village. *Journal of Social Outreach*, 2(2), 145–153.
- Rahmawati, N. (2019). Pengembangan agribisnis jamur tiram. Prosiding Konser Karya Ilmiah Nasional 2019 "Kesiapan Sumber Daya Manusia Pertanian Menghadapi Revolusi Industri 4.0". ISSN 2460-5506.
- Rosmiah, Aminah, S. I., Hawalid, H., & Dasir. (2020). *White Oyster Mushroom Cultivation (Pluoretus ostreatus) as an Effort to Improve Nutrition and Increase Family Income*.

- Tenda, H. P. U., Tumengkol, S. M., & Kawung, E. J. R. (2020). *The Role of Housewives in Improving Family Social Status in Bahu Village, Malalayang District, Manado City* (Vol. 13, Issue 2).
- Yusiana, E. (2018). The Make Sweet Potato Chips with Different Flavors by Women Group Farmers Harapan Baru in Walelagama District, Jayawijaya, Papua. *Agrocreative*, 4(2).