

Diversification of Vegetable Chip Products in the UP2K Group to Increase Income in Kondangjaya Village

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ABSTRACT

Vegetable cultivation is one of the efforts made by the UP2K group to optimize the fulfillment of household food needs, and it is the flagship program of Kondangjaya Village to optimize village resources. Vegetables are an important commodity households need to meet their daily food needs. One of the problems with vegetables is that they are easily damaged, therefore it is necessary to process vegetable products into food chips with high economic value. The purpose of the service is to make various vegetable chip products to create products with high economic value, in addition to increasing the knowledge and skills of the UP2K group in making various chip products to help increase household income. The implementation method used starts with preparation, socialization, training, to mentoring of the UP2K group. The result of implementing this service is that the women farmer group is able to increase the knowledge and skills of partners, namely the UP2K group, in utilizing vegetable commodity products to diversify high economic value chip products, as well as being able to increase the knowledge and skills of the UP2K group in making product diversification, namely oyster mushroom chips, spinach chips, bitter melon chips and betel leaf chips.

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INTRODUCTION

Kondangjaya Village is one of the villages located in East Karawang District, Karawang Regency. Kondangjaya Village has 6832 heads of families and 22 hamlets. The UP2K group (Efforts to Increase Family Income) is part of the special work program of the Kondangjaya Village PKK. The purpose of this group was to realize an increase in family income and welfare through the development of the potential of Kondangjaya Village residents. The UP2K group was inaugurated on March 4, 2022, and began during the COVID-19 pandemic. During the pandemic conditions, many people stopped working and suffered economic difficulties. To overcome this problem, a group of housewives was formed through the UP2K group. The goal is to help increase the family's household income. UP2K has a management and member structure consisting of 12 members. This is by the Kondangjaya Village Development Plan, which aims to increase the development of MSMEs and community management by optimizing the potential and resources of the village to realize a prosperous society.

Housewives are the key in every family to organize and manage the family's food and economic needs (Tenda et al., 2020). Economic needs that continue to increase but are not accompanied by increasing incomes make it difficult for households to improve the economy and welfare. Therefore, through this UP2K, housewives are empowered to help increase family income. Various activities have been made by the UP2K group starting from vegetable cultivation activities such as oyster mushrooms and spinach by utilizing public facility land, making processed products such as various wet cakes, and drinks. The processed products made have not developed optimally, this can be seen from the various activities of UP2K which is still processing processed products and packaging simply. Various activities to increase income have not been optimally carried out, because processed products made have not yet developed in the market. UP2K experienced various problems, including (1) Low knowledge of the use of processed vegetable production, so that harvested vegetable products such as oyster mushrooms are only sold in fresh form. In addition, processed products have not taken advantage of production technology. This has implications for the suboptimal vegetable yield obtained and the production of processed vegetables is small. As a result, it does not meet consumer demand, product competitiveness is low and creativity in the creation of processed products is still not optimal. (2) Lack of knowledge of Human Resources' abilities in business management starting from planning, management, and financial management. As a result, the business did not develop. This occurs due to the lack of human resource ability in managing business and financial management (Andika et al., 2018). (3) The lack of knowledge about product packaging and the use of digital marketing is also an obstacle experienced by UP2K, this has an impact on the marketing of products that have competitiveness and economic value and the lack of optimal market reach (Diana et al., 2022).

Vegetable cultivation is one of the efforts made by the UP2K group to optimize the fulfillment of household food needs, and it is the flagship program of Kondangjaya Village to optimize village resources. One of the vegetables that are cultivated, of which is oyster mushrooms. Oyster mushrooms are a type of exotic vegetable commodity that has high economic value. However, the cultivation and utilization of processed mushroom products of the UP2K group are still not optimal, the oyster mushroom harvest is sold in fresh form and many are damaged. The average harvest reaches 5kg per day and is sold at a low price of Rp.5,000 per kg. The nature of vegetable products is not durable and easily damaged, this is a problem for the UP2K group in utilizing vegetable crops in processed products with high economic value. Not only oyster mushrooms but various other types of vegetables such as spinach are also grown. Vegetables such as mushrooms, spinach, bitter melon, and betel leaves (medicinal plants) can be processed into food products with high economic value, considering that the benefits of consuming vegetables are to improve the health of the body because of the many vitamin contents in them (Yulianto et al., 2007).

Making processed food products from vegetables is an alternative for people, both adults and children, to continue consuming vegetables. The target of this PKM is a group of housewives who are members of the UP2K group. The empowerment of housewives needs to be carried out through PKM activities to

overcome the problems faced by the UP2K group, namely utilizing vegetables into a product with high economic value, processing crops, and marketing products to various regions. This can be done through education, training, and mentoring to the UP2K group to improve competence so that the business and processed products can develop optimally and have high economic value. This is certainly able to help increase household income and economic resilience as well as family welfare. The purpose of implementing community service in the UP2K group in Kondangjaya Village is to help increase community income and community welfare in Kondangjaya Village.

METHOD

Methods and Techniques of Approach

Understanding the complexity of the problems faced by partners to develop the UP2K women's group business that has been undertaken so far and strategic business as an effort to increase household income and welfare through the manufacture of processed vegetable products in Kondangjaya Village, Karawang Regency. Therefore, to ensure the success and sustainability of the implementation of the Community Service Program (PKM) through the community partnership scheme, the approach to program implementation in overcoming community problems will be *the Participatory Learning and Action (PLA)* method (Darmawan et al., 2020). 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.

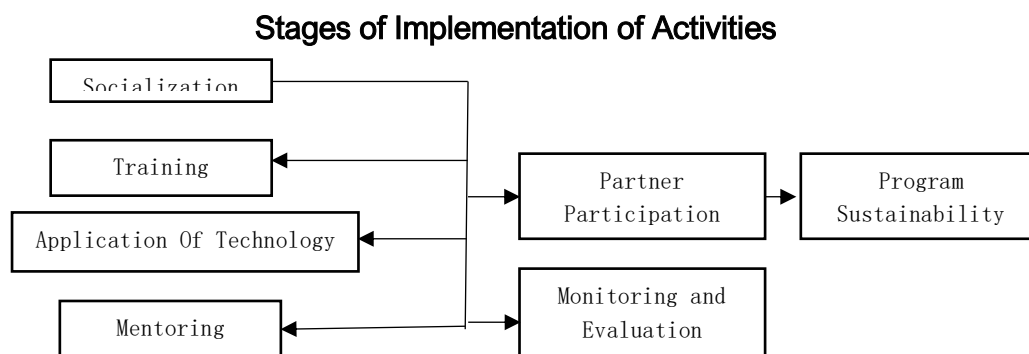


FIGURE 1. Stages of Implementing Community Service Activities

Socialization

Socialization is the first step in carrying out activities. Socialization is an important stage in delivering PKM programs and activities. The socialization activity was more emphasized on providing understanding and understanding to the UP2K women's group about the importance of the PKM program related to efforts to overcome the main problems of partners, namely production, business management, and vegetable processing technology into various processed products as well as digital marketing to develop diversification of processed vegetable chip products as a strengthening of the economy and household food security in Kondangjaya Village. Socialization is very important to introduce the programs that will be implemented in the implementation of community service (Sumadi et al., 2023).

Training Implementation

To solve the problem of low competence (mastery of knowledge and skills) owned by partners, as summarized in Table 1, at this stage partners are equipped with an understanding of processing techniques for the production of various processed vegetable chips, business management, and financial reporting as

well as *digital marketing*. Training is important to improve a group's knowledge and skills in product processing (Hendrawati et al., 2023). Interesting product processing and packaging manufacturing practices and processed product manufacturing practices. 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. This is to provide an understanding of PKM activities and ease of using methods so that in this part the method used is *participatory learning and action*.

Application of Technology

At this stage, partners are accompanied by the PKM implementation team and MBKM program implementation students fully and completely in carrying out the entire series of activities using the *Participatory Learning and Action* (PLA) method. Training and the use of appropriate technology in processing various vegetable chip products and mastery of digital marketing are carried out to improve the competence and skills of partners. To achieve the effectiveness of the implementation and the achievement of the output target, namely the improvement of partner knowledge and skills, the implementation of technology is important in overcoming the low knowledge and skills of partners in increasing the added value of the products produced into products that have high economic value.

The involvement of partners with the MBKM team of lecturers and students in this activity starts from planning processed products, carrying out training and product manufacturing practices, and packaging. The presence and role of students in the context of implementing the MBKM program will be very important because, in addition to students learning to live and understand the problems faced by partners (communities), they are also the driving force in various activities to carry out activities. The role of students is very important in accompanying the implementation of all activities starting from preparation, training, and production processes to the completion of a series of activities that have been programmed. To meet the requirements for the coverage of two MBKM activities in achieving the Main Performance Indicators, students carry out research and publication assignments in accredited journals.

Mentoring and Evaluation

Assistance to partners is carried out by the PKM team, namely lecturers and students by providing assistance starting from the initial steps of socialization, training, and technology implementation practices. The implementation of technology implementation in the UP2K group is intensively accompanied by the team through direct practical training and ongoing consultation with the PKM team. This is done to ensure that partners can implement the technology that has been provided. In addition to mentoring, periodic evaluations are also carried out to determine the success of the program. Starting from the implementation of socialization, and training to technology implementation. Evaluation is carried out in each implementation of the program to find out the success of the program, and if in the implementation of the evaluation it is known that the success of the program is still lacking, that is, the partners still do not understand well, then the PKM team will follow up, namely providing intensive assistance to partners and reassuring the success of the program that is being carried out.

Program Sustainability

The sustainability of the program implemented is not only limited to the implementation of PKM activities. Furthermore, further assistance will be provided to partners so that partners can create a vegetable chip product business and market products with a wide range. Communication with local governments is also carried out starting from village governments, and sub-districts to MSME and agriculture offices to help support and develop UP2K through various businesses carried out.

Partner Participation

In the implementation of the program, partners provide location facilities to carry out various activity agendas that have been programmed, besides that partners also follow all implementation agendas ranging

from observation, joint discussions, implementation of training and practice as well as mentoring UP2K women's groups.

Monitoring and Evaluation and Program Sustainability

Monitoring and Evaluation

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 implementation of the program if <85% needs to be further improved and assisted. The fourth evaluation was carried out to ensure the success of the implementation of the program by increasing the competence of partners by >85%.

Sustainability of PKM Activity Program

For the sustainability of the implementation of this community partnership activity (PKM), monitoring and evaluation activities continue to be carried out as well as assistance to farmers in applying technology to create and develop products from processed vegetables. In addition, communication was also carried out between the Regional Government, both the MSME office and the agriculture office to help develop training facilities for UP2K women's groups.

RESULTS AND DISCUSSION

The implementation of service to the UP2K group is carried out in several stages, including starting with a joint discussion with the UP2K group together with the service team group. Discussion with the group about the problems experienced by UP2K. The existing problem is related to the use of vegetable products that are not durable and easily damaged, Agricultural products, especially vegetables, are not durable and easily damaged (Drianti & Sinaga, 2015). This requires technology to process vegetable harvest products into a product that is durable and has high economic value. The solution to the problem offered by the Community Service implementation team is to make processed food chips from the vegetable commodities produced, among others are oyster mushroom chips, spinach, bitter melon, and betel leaves. This was welcomed by the UP2K group which subsequently coordinated the implementation of socialization and training on product manufacturing.



FIGURE 1. Discussion with Farmer Groups and UP2K Kondangjaya Village

The socialization and implementation of product manufacturing training are carried out jointly by the community service implementation team together with the local government and the community at the location of the farmer group. The implementation of socialization began with an introduction to remarks from the village government by giving a good greeting to the implementation team and groups in carrying out socialization and training. Socialization was carried out by providing material to the group, including material to improve the quality of the UP2K group through skills in managing business finances appropriately, this was done with business financial management management to develop properly. In addition to financial management materials, digital marketing materials were also delivered to the UP2K group to optimize products that have been made to be sold to the market. Digital marketing methods are effective methods by utilizing digital technology and reaching a wider market. In carrying out community service, socialization is an important part of providing education and understanding to the group about the importance of the service being carried out (Ferazona et al., 2022).

Financial management management is very necessary to increase business development, especially in food products. Management plays an important role in improving the quality of the business or business being run (Apriyanti, 2020). The financial management management material was delivered by the service team, and it was very welcomed by the UP2K group and the farmer group, the material provided knowledge and skill improvement to the group to manage finances in the group and the management of business development to be carried out. Digital marketing provides knowledge about the benefits of managing product marketing through digital technology. Digital marketing is a strategy that can be used to increase product sales in a business, therefore this is important in marketing agricultural products (H. T. Saputra et al., 2023). Utilizing digital technology provides increased knowledge to the UP2K group to expand market reach.



FIGURE 2. Socialization and Submission of Financial Management and Digital Marketing Management Materials

In addition to socialization and delivery of financial management and digital marketing materials, product manufacturing training activities were also carried out by the service team UP2K groups and the community. The training was carried out jointly with the UP2K team and group members in practicing the manufacture of various vegetable chip products. Training is important, both training in product manufacturing and product packaging, because this can increase the attractiveness of the product to be sold. (Octaviany et al., 2024). The training began by preparing the materials and tools that will be used according to the products to be made, namely oyster mushroom vegetable chips, spinach chips, bitter melon chips, and betel leaf chips. The various ingredients prepared include vegetable products, vegetable oil, spices such as salt, seasonings, rice flour, coriander, and so on. The tools used to make chip products include stoves, fryers such as natural fryers, shovels, and sutils, as well as oil slicing technology tools and packaging, namely plastic and product packaging labels that have been made by the service team.



FIGURE 3. Product Manufacturing Practices and Training

The product-making training was attended by all members of the UP2K group, starting from the preparation of ingredients to the preparation of processing spices to be fried into chips. Various stages were enthusiastically followed by all group members. They are very happy to be able to take part in training and practice product manufacturing activities firsthand. In addition to product manufacturing training, the application of technology is also applied in product manufacturing, namely using a spinner machine to reduce the oil content in vegetable chips. The chip products produced include oyster mushroom chips, spinach chips, bitter melon chips, and betel leaf chips. The resulting chip products are also practiced by packaging products using pressing equipment and installing packaging labels.



FIGURE 4. Vegetable Chip Products

The implementation of community service is not only carried out through socialization and training but also continuous assistance to the UP2K group. Assistance was carried out by the service implementation team to the UP2K group starting from product preparation to product marketing implementation. Assistance to farmers is important to foster and develop businesses run by farmers, this will have an impact on the quality and results obtained (Ariyandi, 2017) Mentoring or coaching farmers is also effective in improving the quality of farmer group empowerment (Rudyarti et al., 2021). Monitoring and evaluation are also carried out by the service implementation team. Evaluation is an important part of implementing community service (Y. Saputra et al., 2022) Monitoring and evaluation are also carried out by the service implementation team. Monitoring is carried out by monitoring the implementation of service carried out, evaluation is also carried out by evaluating every activity carried out by the implementation team to the UP2K group. The benefits of this service implementation are to increase the knowledge and skills of the UP2K group in processing vegetable products into various vegetable chips that have high economic value. The purpose of this service is to improve the knowledge and skills of the UP2K group in making vegetable chip products to help increase household income.

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 the UP2K group in utilizing vegetable commodity products to diversify chip products with high economic value.
- Increasing the knowledge and skills of the UP2K group in diversifying products, namely oyster mushroom chips, spinach chips, bitter melon chips, and betel leaf chips.

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