

Post-Harvest Processing of Agricultural Products Supporting Local Wisdom in the 2022 Matching Fund Program

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ABSTRACT

Traditional food processing has promising potential for development, due to the high dependence of the community on processed meat and fish products to meet the nutritional needs of the community. The traditional food processing is very complex and is based more on the conception of local wisdom which has been passed down from generation to generation. The characteristics of traditional food processing are the type and quality of raw and additional materials which vary greatly, and environmental conditions that are difficult to control. The processing process still has many shortcomings because it relied more on natural factors, the treatment was not measured quantitatively and had not implemented a hygiene sanitation program.

INTRODUCTION

The high dependence of the community on processed meat and fish products in meeting the nutritional needs of the community makes traditional food processing have good prospects for development (Mishra et al., 2021). The traditional food processing process involves complex steps and is based on the conception passed down from the ancestors to their offspring. The distinctive feature of traditional food processing is the type and quality of raw materials and auxiliary materials which vary greatly, and environmental conditions which are difficult to control (Heruwati, 2002). Traditional food processing tends to depend a lot on natural factors. Furthermore, the treatment is not measured quantitatively. The processing process done by the partners had not implemented a hygiene sanitation program, so, having referred to Maryeni & Sya'bandi (2020) it was necessary to develop traditional processing with several improvement efforts by implementing basic feasibility in food processing. Partner participants were given methods for implementing basic feasibility in order to improve the quality of food products and ensure product safety. Furthermore, it was also ascertained whether the traditional processors had carried out the correct processing according to GMP (Good Manufacturing Practice) and had carried out hygiene sanitation according to their operational procedures (SSOP/Sanitation Standard Operating Procedures) to assess the level of hazard, estimate risk estimates, and determine the right measure in supervision with an emphasis on prevention and process control in testing the final product (Setiyadi, 2021).

Conformity of traditional food products to quality standards is also a significant consideration in preventing irregularities in controlling the quality of traditional food products. Quality and quality assurance are part of modern life. Therefore, the concept of quality and quality assurance must be applied in the development of traditional processed products. Without these principles, traditional processed products could be abandoned by society, especially among young people.

On this basis, it was hoped that this activity would be able to restore partners and the younger generation interest in traditional processed food, including functional food from herbal products. With the progress of science and technology in processing, appropriate technology with the application of hygiene sanitation, the image of traditional processed products can be made better so as to produce quality traditional food that is safe for consumption by consumers.

On the other hand, processed product damage can occur during storage and during distribution in marketing (Kitinoja, 2013). Some damage that may occur includes: damage caused by microorganisms, for example bacteria and fungi, damage caused by enzymes, both enzymes derived from products and from bacteria (Rawat, 2015). The spices used in the processing can be used as an ingredient to inhibit damage to processed products (Ardilla et al., 2022). In this activity, several processes were carried out: 1) processing of herbs into herbs, 2) processing of fish products into crispy baby fish, 3) processing of chicken to betutu and roasted chicken with soft bone for the purposes of religious and customary ceremonies and as culinary heritage. Food processing waste was

used for animal feed, fish feed and plant fertilizer. After the activity was administered, training participants from partners were tested for competence in terms of Food Safety and HACCP by 2 different institutions, namely the Professional Certification Agency (LSP) and the National Professional Certification Agency (BNSP). The aim was for them to be ready to independently work in the competent food sector. In addition to the activities carried out, training participants were given assistance regarding entrepreneurship. In accordance with what was stated by Sarjono et al. (2017) Participants were then encouraged to be able to develop an entrepreneurial spirit so as to create a personal commitment to be independent, achieve something they wanted, avoid dependence on others, to be more productive, and to maximize their potential. Entrepreneurial spirit can indeed be grown in everyone, because basically each person has the potential that can be developed to become a successful entrepreneur (Sternberg, 2004). The key is to learn to recognize, manage and develop one's own potential, be ready to work with others, be disciplined and full of dedication, have a strong commitment and be ready to face challenges and obstacles without giving up.

IMPLEMENTATION AND METHODS

This Community Service activity was part of the implementation of Matching Fund activities in 2022 with group partners consisting of young people who wanted to carry out integrated agricultural activities. The initial activities were planting turmeric and ginger and rearing super free-range chickens, which were integrated with fish rearing using an aquaponic system. The aquaponic system done was united aquaculture fisheries with the maintenance of vegetables with a hydroponic system and a Nutrient tank system.

All agricultural products in the form of turmeric, ginger, vegetables, fish and local breed chicken were sold to stalls and local markets. Some of these agricultural products were made into food products to increase their selling value. Processed food products were packaged and labeled and then distributed to consumers.

The implementation of community service started from training, practice, independent activities, until the group was able to make products before marketing them. The group was also given an understanding of developing an entrepreneurial spirit so that after the activity was finished, partners would become independent while being assisted continuously by Warmadewa University.

RESULTS AND DISCUSSION

In this activity the Team carried out training activities by emphasizing traditional food processing. The distinctive feature of traditional food processing is the type and quality of raw materials and additional materials which vary widely, and environmental conditions which are difficult to control and depend more on natural factors and the treatment is not measured quantitatively (Singapurwa & Candra, 2018). The processing carried out by some of the trainees

has not implemented a hygiene sanitation program, so it was necessary to develop traditional processing with several improvement efforts by implementing basic feasibility in food processing as said by Anhar (2016).

In carrying out activities, Participants were given methods for implementing basic eligibility which were carried out to improve the quality of food products in ensuring product safety, by carrying out proper processing according to GMP (Good Manufacturing Practices) and sanitary hygiene according to operational procedures (SSOP/Sanitation Standard Operating Procedures). In the training, participants were given an understanding of the assessment of aspects of the condition of the processing room, the condition of the production site, production equipment, water supply, personal hygiene and so on as explained by Anhar (2016). During the training activities the response of the participants was very enthusiastic in following and listening to the explanations given by the resource persons. The high enthusiasm of the participants in the implementation of this training activity implied the effectiveness of the training activities. It is expected that the ability and understanding of participants can develop from before.



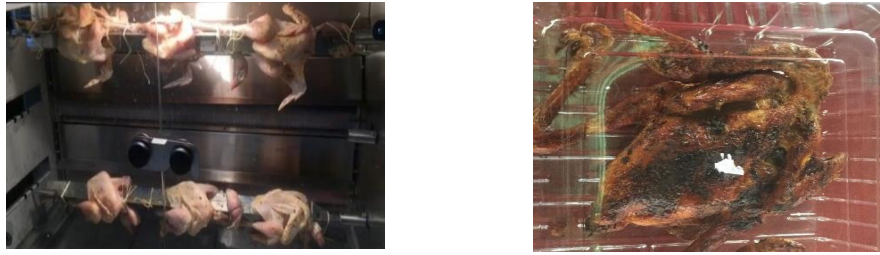


Figure 1. Post-harvest processing activities of agricultural products

The provision of materials and training was expected to be able to provide additional knowledge. Thus, that participants are able to meet the predetermined requirements to produce quality products according to consumer demands and were expected to be able to develop and implement control procedures, monitor, and maintain sanitation conditions and practices (Thaheer, 2008). The GMP system also ensures consistency of product quality standards which are used as minimum requirements for an industry to operate (Feni et al., 2015). In this activity, training participants were taught to process agricultural products such as herbs into herbal medicine, fish products into crispy baby fish, processing of chicken betutu and soft bone baked chicken. The implementation of the training can be seen in Figure 1.

During the training process the participants were also reminded about the concept of Zero Waste-based food processing in supporting local wisdom. Traditional food processing based on local wisdom is a form of knowledge that is unique to an ethnic group, which is obtained from generation to generation, by utilizing the biodiversity in their environment (Darmadi, 2018) (Syamsuri et al, 2022). This concept is expected beneficial to bring out the potential of entrepreneurs by utilizing and innovating from the nature and local wisdom in the area. Zero waste itself is a process of minimizing production of waste starting from the production to the end of a production process (Fertiasari et al., 2019). The zero waste concept is expected to be able to provide added value so as to be able to provide alternatives in developing and improving the economy of partners and training participants (Fatimatul Munawaroh & Jacoeb, 2020).

In addition to the implementation of the training, participants were provided with assistance regarding entrepreneurship so that they were able to develop an entrepreneurial spirit and to spur personal commitment to be independent. They can also achieve something they have been expecting, avoid being dependent on others, to be more productive, and to maximize their potential. This is in accordance with what was stated by Setiawan & Suryono (2022), Research et al. (2017). Participants were also given entrepreneurial tips. Knowledge of entrepreneurship is basically owned by everyone, it's just that sometimes it isn't explored properly so it doesn't develop properly. The business spirit should be instilled in each individual to create entrepreneurship in society. The main characteristics of a person who has characteristics in running and running his business are a tough personality, not easily carried away by other people's opinions. They also don't object other people's constructive suggestions outright; they take them into consideration instead. An entrepreneur can freely

determine his schedule, be himself, work according to his interests and talents. The success obtained can also be enjoyed by others. True success is a happiness that a person feels through his work even though it is not his field of work. The characteristics of a person's mental maturity can be seen when he does not depend on anyone but remains critical and objective of the activities carried out (Mayasari et al., 2022).

CONCLUSIONS AND RECOMMENDATIONS

Through this training activity Partners and participants increased their understanding and knowledge on good food processing by implementing GMP and SSOP. In addition, they were also able to raise or bring out entrepreneurial potential and innovated from the results of natural wealth and local wisdom in their area.

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