

Training in the Processing of Vegetable Catfish Nuggets for Lauk Babakan Village PKK Women, Bogor

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ABSTRACT

Residents of Kampung Lauk Babakan Bogor have their main source of income from catfish farming. So that their lives are guaranteed through their income and work, especially after the pandemic, the people of Kampung Lauk Babakan must be able to act creatively to increase the economic value of catfish. Residents of Kampung Lauk Babakan tend to sell post-harvest catfish directly to consumers or distributors at relatively low prices. Processing catfish into vegetable nuggets can increase the economic value of catfish. For this purpose, the STP Bogor community service agency provided training to the people of Kampung Lauk Babakan, especially PKK women, about processing catfish into vegetable nuggets. Training activities are expected to be able to increase the skills and creativity of the community to manage catfish. Community service is carried out by providing counseling about the nutritional content of catfish and training in processing it into vegetable catfish nuggets to increase its economic value. The result of this dedication to Kampung Lauk Babakan is an increase in knowledge about the nutritional content of catfish and an increase in creativity in processing catfish as a solution to increase the selling value of catfish.

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INTRODUCTION

Fish is still the most important source of animal protein for humans. As previously mentioned, fish is a nutrient-rich food that is very beneficial for human growth and health. Fish is a source of animal protein that the body needs. In addition to protein, vitamins, fats, and minerals are found in fish and are other substances that the body needs. This causes the need to consume fish regularly. In addition, fish is a more economical source of protein compared to other protein sources such as beef and goat (Yuniastri et al., 2020).

Fish contains various proteins, fats (omega 3 fatty acids), vitamins (vitamin A, vitamin D, vitamin B6, vitamin B12), and minerals (iron, iodine, selenium, zinc, and fluorine) needed by the body (Herawati et al. al., 2020). Based on research (Ubaidillah & Hersulistyorini, 2010) the nutritional content of catfish is quite high, namely protein (17.7%), fat (4.8%), minerals (1.2%), and water (76%). The advantage of catfish compared to other animal products is that it is rich in leucine and lysine and omega-3 and omega-6 fatty acids (Santoso et al., 2019). Leucine (C₆H₁₃NO₂) is an essential amino acid that is necessary for the growth of children and for maintaining nitrogen balance. Leucine is also useful for the overhaul and formation of muscle protein. While lysine is one of the 9 essential amino acids needed for growth and tissue repair. Lysine is an amino acid that is very important and very much needed in the growth and development of children (Andri et al., 2020)

Catfish meat has a short shelf life, as a result, it needs to be processed to increase the shelf life of catfish. Catfish has been used as an ingredient for making meatballs, shredded meat, meat & nuggets (Darmadi et al., 2019). Nugget is a high-protein food made from meat containing animal protein or from seeds containing vegetable protein. Nugget is a popular food among people because it has high nutritional value, delicious taste, and easy preparation. The life of modern citizens who want everything to be easy makes nuggets as a culinary dish that is usually used as a side dish or snack. Public acceptance of nugget products has been increasing lately, this can be seen from the number of nugget products that are found based on various standard materials such as chicken, beef, and fish nuggets. Processing of catfish meat as nuggets is needed to increase the variety of fish culinary preparations and increase the shelf life. So far, the use of catfish is still limited to frying. Some consumers do not like the rancid smell of fried catfish even though the nutritional value is relatively high.

Residents of Kampung Lauk Babakan Bogor have their main source of income, one of which is raising catfish. So that their lives are guaranteed through income and work, especially after the pandemic, the residents of Kampung Lauk Babakan should be able to act creatively to increase the economic value of catfish. The people of Kampung Lauk Babakan tend to sell post-harvest catfish directly to consumers or distributors at relatively low prices. One of the efforts that can be done to increase the economic value and income based on the output of catfish farming is to process the catfish first.

One of the types of processing that can be done is cooking catfish into nuggets. The selection of nuggets as fish processing ingredients is based on the form based on nuggets that can be varied and can extend the shelf life based on. Nuggets can last a long time if kept frozen. In addition, the processing of nuggets is easy

Several studies that have been conducted using nugget processing include research on processing nuggets with tofu and vegetable-based ingredients (Khatimah, Kadirman, and Fadilah, 2018), and the effect of algae and sago flour. Including an analysis of preferences for processed nuggets is accepted. (Syamsuddin, Lahming, & Muhammad, 2015), research on the favorite characteristics of nuggets when added with tomato paste (Wulandari, Suryaningsih, Pratama, Putra, & Runtini, 2016), business development of nuggets at the Lhokseumawe State Polytechnic (Fona, Kurniasih & Raudah, 2017). and studies on the conversion of salted fish into nuggets (Hardoko, Sasmito, Puspitasari & Lilyani, 2018).

Processing catfish into nuggets is another way to stimulate a child's appetite for fish. This is necessary because fish consumption is very important for the growth and development of children. This is because fish contains DHA which is good for children's brain development (Ulya, M, Artanti, Kusumawardhani, & Sa'adah, 2015) which has the advantage of extending the shelf life of catfish products. After all, it can be frozen through the freezing process.

IMPLEMENTATION METHOD

The implementation of Community Service is divided into three stages, namely the activity planning stage, the activity implementation stage, and the activity evaluation stage. Activities carried out at the planning stage include conducting field surveys with the assistance of partner village officials, analyzing problems, designing activities to be carried out, designing solutions to problems received, and designing action plans.

Activities that will be carried out at the implementation stage include socialization on the development of processed catfish products to be made into nuggets, demonstrations, and hands-on training on how to make processed products into nuggets using catfish cultivation results in the village of Lauk Babakan. The evaluation activities carried out consisted of assessing the enthusiasm of residents for PKM activities and increasing knowledge about alternative catfish treatments.

The training will be carried out in September 2022. The activities carried out are conducting socialization on the development of processed catfish products and explaining the nutritional content of catfish which will be used as vegetable nuggets and training or demonstrations on making processed catfish products into vegetable nuggets by utilizing the results of catfish cultivation. In the evaluation stage, the evaluation activity carried out is by evaluating the enthusiasm of the residents for the activity.

RESULTS AND DISCUSSION

Counseling on the Utilization of Local Catfish for Processed Vegetable Catfish Nuggets

This activity began with providing counseling and knowledge to PKK mothers in Kampung Lauk Babakan Bogor regarding the material and practices to be carried out. Making catfish nuggets begins with preparing the ingredients, namely 400 grams of fish meat without bones or thorns, 40 grams of flour, 40 grams of sago flour, 1 teaspoon of ground pepper, 1/3 teaspoon of ground nutmeg, two eggs are beaten briefly, 75 grams of carrots, finely diced, 1/2 teaspoon of baking powder, 50 grams of shelled corn, reheated, 100 grams of grated cheese, 50 grams of green beans, heated 1/2 cooked, 1 button mushroom, soaked until fluffy, sliced into small pieces, two stalks of celery, finely chopped, 1 stalk of green onion, finely chopped & sufficient oil for frying.

The ingredients for smearing all of them are mixed homogeneously, consisting of 100 grams of flour, ½ teaspoon of ground pepper to taste, 25 grams of cornstarch, ½ teaspoon of garlic powder, 1 egg beaten briefly, ½ teaspoon of fine salt to taste, 150 milliliters of ice water & enough breadcrumbs. The tools used in the process of making catfish nuggets include large bowls, spoons, synchronous molds, square or rectangular tins, knives, cutting boards, grated cheese, steamers, plastic gloves, closed containers, frying pans, spoons, oil filters, stoves & packaging. According to (Bakso et al., 2018) & (Nasrullah et al., 2019), the process of making nuggets is shown in Figure 2.

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Figure 1. Vegetable Catfish Nugget Making Demonstration

The implementation of the community service program held counseling for PKK members of Kampung Lauk Babakan Bogor regarding the processing that can be done from the catfish harvest so that the results are not directly sold to buyers without any prior processing. This counseling activity was carried out at the Kampung Lauk Babakan Village Hall, Bogor. Counseling was carried out in September 2022 with the target of counseling being PKK women and residents.

In this counseling activity, the residents of Kampung Lauk Babakan Bogor explained the nutritional content of catfish and mentioned making other processed methods using catfish-based ingredients, one of which was vegetable catfish nuggets. Utilization of catfish in Kampung Lauk Babakan Bogor is still very limited. Apart from being sold privately to parcel catfish traders, catfish is also used as a culinary dish for daily consumption as a side dish. According to the women who attended the training, the catfish was usually fried or steamed.

The texture of catfish meat is relatively softer compared to other fish due to its relatively high water content, which is 76% (Harianti & Tanberika, 2018), as a result of the catfish's short shelf life. In addition to increasing the shelf life of catfish, making catfish as nuggets also add variations to processed catfish apart from being fried or steamed. Some people don't like the fishy smell of catfish. So processing catfish into vegetable nuggets is the right solution. Nuggets are processed food based on meat which besides being durable is also

practical. Processed nuggets are usually liked by children to adults. The nutritional content of catfish is relatively high. Nutritional ingredients for catfish consist of protein (17.7%), fat (4.8%), minerals (1.2%), and water (76%) (Astawan, 2008) as a result of which it can be used as an ingredient functional food, as additional food for toddlers and a relatively promising business opportunity. Based on the business advantages of the vegetable catfish nugget product, it provides benefits.

Fixed costs that need to be incurred in the production business such as production sites, electrical installations, and purchase of equipment. The calculations used in this study assume that the costs used are privately owned and the business premises are privately owned so that the electrical installation is connected to privately owned homes.

Training or demonstration of making processed catfish into vegetable nuggets by utilizing the catfish harvest from Kampung Lauk Babakan Bogor

After the counseling activity, the implementation of the darma residents' work program activities provided training on the manufacture of processed catfish products into vegetable catfish nuggets. The training took place at the Kampung Lauk Babakan Village Hall in Bogor with 20 PKK women and residents as the main participants.



Figure 2. The practice of making catfish nuggets

During the training on making processed catfish, the service participants were enthusiastic to follow the steps on how to process catfish into vegetable nuggets. The service participants were also allowed to try processing catfish using the materials provided. Based on the practical results of the trials carried out, the service participants liked the taste of vegetable catfish nuggets because they had the taste of catfish meat mixed with spices.

Activity Evaluation

The results of the evaluation of the training for the residents of Kampung Lauk Babakan that have been carried out, it is known that the previous training participants did not understand how to cook catfish into processed culinary in the form of vegetable nuggets. Because according to the participants, catfish tend to be oily, as a result, the training participants suspect that catfish cannot be processed into processed nuggets.



Figure 3. Joint Documentation at the closing of activities

After the training activities were carried out and they were allowed to try the vegetable catfish nuggets, the responses of the training participants, 90% gave positive responses. And according to the PKK women were also asked to share the recipe and according to the catfish breeders, they also gave a positive response because they had never thought of creating processed catfish-based ingredients, only selling and buying directly to the market. The knowledge of the training participants also increased after the training was held on making catfish-based vegetable nuggets.



Figure 4. Questionnaire Filling

CONCLUSION

The socialization and training activities for the development of processed catfish products into vegetable nuggets by utilizing the results of catfish farming owned by the residents of Kampung Lauk Babakan Bogor went well and received a good response from the training participants. The training provided can be used as an alternative for processing catfish food besides the way they usually do it, namely frying and pepes. The knowledge gained from counseling and training in the community can be used as a basis for making processed catfish. The alternative provided is a way to increase fish consumption in Kampung Lauk Babakan Bogor residents, provide new business ideas and overcome the problem of the short shelf life of catfish meat and increase the economic value of catfish to increase the income of local people.

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