Catfish Spring Roll Making Training at Yakarim Orphanage, Sidoarjo

Mokhamad Firmansyah^{1*}, Nur Rahmawati²

¹Electrical Technology, Tamansiswa International Polytechnic, Mojokerto ²Industrial Engineering, Faculty of Engineering, Universitas Pembangunan Nasional "Veteran" Jawa Timur, Jl. Raya Rungkut Madya 60294 Waru, Sidoarjo

Abstract–Catfish is one of the fish that lives in Indonesian waters and contains a lot of nutrients. With a fairly affordable price, this fish is highly recommended by nutritionists because it contains Omega 3, 6, and 9, which are beneficial for children's intelligence. However, the interest of the residents, especially children, in consuming this fish is very low. This may be due to the many bones and the fishy smell of this fish. Therefore, this training activity was carried out with the aim of increasing people's interest in consuming catfish by processing it into spring rolls. This training activity used a practice-based socialization approach. The result of this study was a new idea for processing catfish into catfish spring rolls.

Keywords: Snack-making training; Catfish; Spring rol.

1. INTRODUCTION

Catfish (Clarias Sp.) is a freshwater fish commonly found in the waters of Asia and Africa [1]. Catfish is one of the most consumed fish in Indonesia [2]. In addition to its affordable price, the nutrients contained in 100 grams of this fish are varied, including Calories: 105, Fat: 2.9 grams, Protein: 18 grams, Sodium: 50 milligrams, Vitamin B12: 121 percent of daily needs, Selenium: 26 percent of daily needs, Phosphorus: 24 percent of daily needs, Thiamine: 15 per-cent of daily needs, Potassium: 19 percent of daily needs, Cholesterol: 24 percent of daily needs [3]. Additionally, 100 grams of catfish also contains 13.6 grams of omega-3 fatty acids, 22.2 grams of omega-6 fatty acids, and 19.5 grams of omega-9 fatty acids [4]. Omega fatty acids are essential fatty acids needed by fetuses and infants for brain development, disease resistance, as well as the development of vision and immune systems in babies and toddlers [5].

Due to the nutritional content of catfish, it is now highly recommended for consumption by both adults and children. However, many people still dislike this fish because of its fishy smell. To address this issue, various types of food made from processed catfish have been offered. Some examples of processed catfish products include crackers and nuggets [6], [7], [8]as well as catfish sticks and floss [9], [10].

As an effort to increase children's interest in consuming catfish, this community service will include a workshop on making catfish spring rolls. By processing catfish into spring rolls, it is hoped that this fish will become more popular, especially among children. It is hoped that through this training, awareness about the different ways to process catfish will increase.

2. METHOD

2.1 Preliminary Stage

In the preliminary stage, a location survey was conducted to determine the place where the training would be held. The location was chosen based on the need from the orphanage man-agement in the Tropodo area of Waru, Sidoarjo to increase children's interest in eating catfish.

2.2 Training Activity

The activity began with a group prayer followed by a brief presentation on the nutritional content of catfish. The training was then conducted with a practice-based approach, covering everything from the preparation of ingredients to the steps of making catfish spring rolls. The purpose of this training was to provide a new idea for processing catfish into a new food source and to increase the interest of the children at the orphanage in consuming processed catfish.

2.2.1. Ingredients

Here are the ingredients needed to make catfish spring rolls:

Wrapper	Filling
- Wheat flour: 1 kg	- Bean sprouts
- Tapioca flour: 1/4 kg	- Carrots
- Salt to taste	- Catfish meat
	- Garlic: 5 cloves
	- Red chili: 3 pieces
	- Small chili: 3 pieces
	- Flavor enhancer
	- Salt

Table 7. Font styles for references to books, conference proceedings and reports

2.2.2. Step for making catfish spring roll.

Spring Roll Wrapper: Mix the wheat flour and tapioca flour, add water and salt until it be-comes a thin batter. Then cook the batter on a non-stick pan, using one ladleful per spring roll wrapper.

Spring Roll Filling: Grind the seasonings and then sauté. Once fragrant, add the catfish meat, bean sprouts, and carrots. Sauté until cooked.

Spring Rolls: Place the filling onto the spring roll wrapper, then fold the wrapper. Fry until golden brown. Ready to serve.

2.3 Monitoring and Evaluation Activities

After the spring roll-making training, the next activities were monitoring and evaluating the training

program through interviews with the participants of the catfish spring roll-making training

3. RESULT AND DISCUSSION

The activity took place at an orphanage Yakarim in the Tropodo area of Waru, Sidoarjo. This activity was carried out using a hands-on practice-based socialization approach with the aim that training participants could directly try making catfish spring rolls at the orphanage where they live. The enthusiasm of the participants was evident from the numerous questions asked and the direct involvement of the residents in the practice of making catfish spring rolls.



Figure 1. Activity documentation. (a) Practice of Making Catfish Spring Rolls. (b) Sample of products

The benefits that the community gains from this training on making catfish spring rolls in-clude: The community becomes aware of a new food source derived from processed catfish to prevent boredom with consuming catfish, especially among children, Increased interest in consuming catfish among the community due to its abundant nutritional content, It can serve as a new business idea for catfish processed products to increase community income.

4. CONCLUSION

Catfish spring rolls are a type of catfish-based product. Catfish is a freshwater fish rich in nu-trients, particularly omega 3, 6, and 9 fatty acids. By processing catfish into different forms, it is hoped that the

community, especially children, will start consuming this highly nutritious fish. This training activity aims to inspire new ideas for catfish-based products. The lack of interest in consuming this highly nutritious fish among the community is the reason for the necessity of this training. Considering that this village is home to several residents who have side businesses rais-ing catfish, this training is essential to add value to catfish and provide a new food source that is popular among both children and adults.

ACKNOWLEDGMENT

This research would not have been possible without the significant contributions of several individuals and organizations.

REFERENCES

- Lisachov *et al.*, "Emerging importance of bighead catfish (Clarias macrocephalus) and north African catfish (C. gariepinus) as a bioresource and their genomic perspective", *Aquaculture*, p. 739585, 2023.
- [2] R. Gustiano and H. Gadis Sri Haryani, "Economically Important Freshwater Fish Native to Indonesia: Diversity", Ecology, and History, J. Hunan Univ. Nat. Sci., vol. 48, no. 10, 2021.
- [3] T. Manikandarajan, A. Eswar, R. Anbarasu, K. Ramamoorthy, and G. Sankar, "Proximate, amino acid, fatty acid, vitamins and mineral analysis of catfish, Arius maculatus and Plotosus lineatus from Parangipettai south east coast of India", *IOSR J. Environ. Sci. Toxicol. Food Technol.*, vol. 8, no. 4, pp. 1–8, 2014.
- [4] K. B. Heidal, "Evaluating the effects of a nutrition education program on the consumption of omega-3 fatty acids for heart patients". The University of Nebraska-Lincoln, 2003.
- [5] W. Khalid *et al.*, "Functional behavior of DHA and EPA in the formation of babies brain at different stages of age, and protect from different brain-related diseases", *Int. J. Food Prop.*, vol. 25, no. 1, pp. 1021–1044, 2022.
- [6] Yudhistira, D. R. Affandi, and Y. K. P. Artika, "Physical, chemical, and sensory characteristics of catfish karak crackers as nutrition value added", in *IOP Conference Series: Earth and Environmental Science*, IOP Publishing, 2019, p. 12047.
- [7] J. Adeyi, O. Adeyi, E. O. Oke, M. Salaudeen, and M. O. Ezekiel, "Modelling the effect of temperature on drying mechanism of catfish cracker", *NSChE J.*, vol. **33**, no. 2, p. 81, 2018.
- [8] S. Widayani *et al.*, "Quality test of current catfish nuggets in improving children's health", in *IOP Conference Series: Earth and Environmental Science*, IOP Publishing, 2022, p. 12044.
- [9] P. Adi, P. S. T. Panjaitan, A. Permadi, and A. Agustin, "Processing of Noodle Sticks with The Addition of Catfish Meat Flour (Clarias Sp.)", PELAGICUS, vol. 3, no. 2, pp. 77–85, 2023.

[10] W. D. P. Gustyningrum, J. Widodo, M. Zulianto, S. Wahyuni, and T. Kartini, "Diversification strategy of processed catfish products at UD. Matrix Jaya Jember", in *IOP Conference Series: Earth and Environmental Science*, IOP Publishing, 2020, p. 12123.