

Variety of Flavors, Appropriate Technology, and Online Marketing for Developing Milkfish Cracker Small Business

Zainal Abidin Achmad¹, Didiek Tranggono², Sri Tjondro Winarno³, Sonja Andarini⁴, Kusuma Wardhani Mas'udah^{5*}

^{1,2}Communications Science Department, Universitas Pembangunan Nasional Veteran Jawa Timur, Indonesia
 ³Agribusiness Department, Universitas Pembangunan Nasional Veteran Jawa Timur, Indonesia
 ⁴Business Administration Department, Universitas Pembangunan Nasional Veteran Jawa Timur, Indonesia
 ⁵Mechanical Engineering Department, Universitas Pembangunan Nasional Veteran Jawa Timur, Indonesia
 ¹z.abidinachmad@upnjatim.ac.id, ²didiek_tranggono.ilkom@upnjatim.ac.id, ³sritjondro_w@upnjatim.ac.id,
 ⁴sonja_andarini.adbis@upnjatim.ac.id, ^{5*}kusuma.w.fisika@upnjatim.ac.id

Abstrak

Kegiatan pengabdian kepada masyarakat ini bertujuan untuk meningkatkan pendapatan usaha rumah tangga kerupuk bandeng oleh ibu-ibu nelayan di Desa Kalanganyar, Kecamatan Sedati, Kabupaten Sidoarjo. Metode pelaksanaan kegiatan menggunakan sesi konseling, pelatihan, dan praktik. Materi penyuluhan adalah (1) pentingnya mengembangkan berbagai kerupuk berkualitas untuk meningkatkan volume penjualan, (2) pentingnya membuat kemasan yang menarik dan higienis untuk pemasaran produk kerupuk bandeng. Materi pelatihannya (1) membuat adonan kerupuk yang higienis dengan variasi rasa original dan pedas. (2) Penerapan teknologi tepat guna mesin listrik pemotong adonan kerupuk berbentuk silinder. (3) pemasaran online dengan Instagram. Hasil kegiatan ini, ibu-ibu nelayan mampu untuk: (1) membuat adonan kerupuk yang higienis dengan variasi rasa, (2) melakukan pemasaran online dengan Instagram, (3) mampu mendesain logo dan kemasan baru, (4) meningkatkan kapasitas produksi.

Kata Kunci: kerupuk ikan bandeng; pemberdayaan perempuan; perempuan nelayan

Abstract:

This community service activity aims to increase the income of the milkfish cracker home industry by fisherwomen in Kalanganyar Village, Sedati District, Sidoarjo Regency. The method of implementing the activity uses counseling sessions, training, and practice. The counseling materials are (1) the importance of developing a variety of quality crackers to increase sales volume, (2) the importance of making attractive and hygienic packaging for marketing milkfish cracker products. At the same time, the training materials are (1) to make hygienic cracker dough with variations of original and spicy flavors. (2) to apply an appropriate technology for cylindrical cracker dough cutting machine. (3) to do online marketing with Instagram. As a result of this activity, fisherwomen could: (1) make hygienic cracker dough with a variety of flavors, (2) do online marketing with Instagram, (3) be able to design new logos and packaging, (4) increase production capacity.

Keyword: fisherwomen; milkfish crackers; women empowerment

Submited: 16/03/2022 Revision: 28/03/2022 Accepted: 21/04/2022





INTRODUCTION

Based on the results of research on the Local Potential-Based Model for Empowering Fisherwomen in Sidoarjo Regency in 2017 and 2018, it shows that the strategy used in the approach to empowering fisherwomen were six development approaches, namely: (1) developing human resources, (2) natural resource development, (3) business development, (4) institutional development, (5) program and activity development, and (6) environmental development. In addition, a combination of several approaches (mixed approach) needs to synergize the six developments; namely, the regional approach and the social entrepreneurship approach combined simultaneously with the participatory approach method (Prabowo, Tranggono, & Nuryananda, 2019).

There are three stages used to formulate a model for empowering fisherwomen based on local potential in Sidoarjo Regency using an entrepreneurial approach, namely 1) Look, is the activities included observations, interviews, initial assessments of the target group (fisherwomen), local resources, and social environment. The economy and the system of resources that exist inside and outside the community; 2) Think, this activity can be through focus group discussions (FGD) with the target group and the potential and resource systems in their environment. Then, it can utilize the empowerment program for fisherwomen; and 3) Act, or treatment, in this activity carried out various guidance, assistance, facilitation, and monitoring and evaluation (Tranggono, Dwiridhotjahjono, Andarini, & Rasyidah, 2018). Therefore, the formulation of the local potential-based fisherwomen empowerment model in Sidoarjo district using mixed approach is an effort to develop the independence and welfare of fisherwomen by increasing the knowledge, attitudes, skills, behavior, abilities, awareness, and utilization of resources and optimizing local potential through the determination of policies, programs, activities, and assistance by the essence of the problem and priorities for meeting basic needs through the development of local economic potential by taking into account environmental sustainability.

Kalanganyar Village is one of the villages located in the village of Sedati district, Sidoarjo regency. Geographically, Kalanganyar Village has border in the west that is Buncitan Village, Madura Strait in the east, Sawohan Village in the south, and Tambak Cemandi Village in the north. The area of Kalanganyar Village is 27.3 Km2 or 2730 hectares (BPS Kabupaten Sidoarjo,



2021). Kalanganyar Village consists of 6 RWs, of which there are 23 RTs. Kalanganyar Village has a total of 1851 families (Kepala Keluarga or KK), while the population is 5348 people. The number of men is 2635 people, and the number of women is 2713 (Rizkiyah, 2019). Two-third of the Kalanganyar Village area consists of ponds, artificial ponds for maintaining or cultivating fish. The varieties of fish in this fish pond are Milkfish, Mujaer, Tilapia, Payus, and Shrimp (Sindu and Vanami) (BPS Kabupaten Sidoarjo, 2020).

The people of Kalanganyar Village, especially the fisherwomen, are often involved in joint business groups, among others, in making milkfish crackers. In the conditions of the COVID-19 pandemic, many business sectors experienced a decline and bankruptcy, especially in the industrial-scale business sector (Wu, Chen, & Chan, 2020). However, many micro and medium-scale businesses can still survive, even though their sales figures have fallen drastically (Sugihamretha, 2020). Based on the research team's experience in generating marketing for micro, small and medium enterprises, the online marketing model is through social media (Achmad, Azhari, et al., 2020). This experience deserves to be transferred as a form of assistance in the field of marketing (Mas'udah et al., 2021).

The development of the milkfish cracker home industry in Kalanganyar village, Sedati district, Sidoarjo regency, is a follow-up application of the results of previous research through community service activities: Application of Research Results for the Community (PIHAT). This activity is significant for the families of fisherwomen in Kalanganyar Village to increase income and welfare. The research team predicts that the milkfish cracker home industry can increase production capacity. The increase in the production of the milkfish business can increase the income of fisherwomen families. The fisherwomen in Kalanganyar Village have been producing milkfish crackers for a long time through the Joint Business Group (Kelompok Usaha Bersama or KUB). However, this business is more of a sideline with a speculative marketing model, so it is not developing well, especially in the conditions of this COVID-19 pandemic. Therefore, the home industries milkfish need assistance to develop their business. One of the ways is the empowerment of fisherwomen in the home industry Milkfish cracker in Kalanganyar Village, Sedati District, Sidoarjo Regency.

Fisherwomen as a coastal communities have complex problems, including poverty, social marginal-ization, forgotten dignity, and low levels of education (Ogden, 2017). At the same



time, education is the most crucial community empowerment strategy for increasing personal and group capacity (Mardliyah & Achmad, 2017). Educated community groups have a function to provide support for their members, including helping individual psychological development by providing a platform for intellectual and emotional development. While educated community groups function for social organizations to increase positive cooperation, they become an essential factor for increasing social productivity, social awareness, and strengthening social organizations (Tranggono, Dwiridhotjahjono, Andarini, & Rasyidah, 2017). Education is an integrated process to improve social progress, economic improvement, and cultural integration so that it helps empower the community. For this reason, the strategy to improve the welfare of coastal communities is to provide life skills education based on productive economics by utilizing the local potential for fisherwomen (Tranggono, Djajati, & Andarini, 2016). In order to improve the welfare of coastal families in Kalanganyar village, among others, increasing the role of fisherwomen in various productive economic activities to earn additional income (Achmad, Mardliyah, Siswati, Luawo, & Wahyudi, 2020).

Kalanganyar village has a large area of brackish water ponds and is the largest milkfishproducing village in Sidoarjo regency. One of the processed Milkfish that can develop is Milkfish crackers because milkfish have a distinctive taste different from shrimp and shellfish. So far, the Sidoarjo regency is the best producer of shrimp crackers in Indonesia. So, of course, the effort to develop the Milkfish cracker business in Kalanganyar village can increase the potential for regional income.

Studying women is always related to the values that distinguish social identity between men and women and mandatory activities for people in the economic, political, social, and cultural fields. These values and activities occur in family, community, and nation life (Bisowarno & Untari, 2019; Thomas, 1988). For example, women's empowerment is a process of awareness and capacity building for greater participation to have power and oversight in decision-making. Further-more, transformation action produces something useful for their lives and families (Humphries, 1993; Zulham, Hikmah, Shafitri, & Yuliaty, 2020).

Women's empowerment in coastal areas is an effort to break poverty, growing economic strength, and generate independence. The COVID-19 pandemic condition requires extra attention to empower women. Women as family finance managers deserve empowerment



programs, their vital role in regulating family money for food and education needs. Women's poverty in coastal areas has complex problems, namely the factors of being economically poor, socially marginalized, and forgotten in function and dignity. The education level of the people in the coastal area is still primarily low. Education is essential because community empowerment will increase individual and group capacity (Hardjosoewito, 2009; Pasda, Bado, & Hasbiah, 2019; Tranggono et al., 2020).

Women's empowerment should occur in groups because it can foster bonds of togetherness and kinship. Empowering women through various counseling and training programs for groups can help a woman's psychological development. Empowerment to groups provides a platform for the intellectual and emotional development of women. A sense of shared destiny and hope to grow together are fundamental forces for women to be more productive.

In this PIHAT scheme community service program, the target group of women is KUB Planet Bandeng. All members of KUB have had various home industries based on milkfish, including smoked milkfish, soft-thorn milkfish, grilled milkfish, brains of milkfish, and crackers of milkfish. However, the business that has not received severe management is Milkfish Crackers. For this reason, the researchers gave a workshop in the form of procedures for making milkfish crackers that are hygienic and have a variety of flavors.

The potential for the development of milkfish crackers is enormous, considering the large area of ponds in Kalanganyar Village covering 2,232 hectares, with a total of 579 pond owners. Economically, the profit margin for selling milkfish crackers is more significant than other milkfish-based preparations. However, there has been no serious attention from the local government and investors. Based on the mapping of the problem, fisherwomen experience obstacles to the development of milkfish crackers. The first obstacle is the lack of knowledge about the processing of milkfish crackers. In general, they make crackers traditionally, not yet using a food technology approach (calculate the composition of ingredients, apply material hygiene, maintain packaging quality) so that the processed food products in the form of milkfish crackers are less able to compete with other types of fish-based crackers that are already on the market.

The second obstacle is marketing. There is limitation for sales of milkfish crackers



production in Kalanganyar Village to serve the needs of the people of Kalanganyar Village. Even more for the consumption needs of the fisherwomen family itself. They are not familiar with the application of marketing technology (sales promotion, packaging strategy, structuring distribution channels, calculating profit and loss).

The presence of a research team in the PIHAT program can help overcome these two main obstacles. Small businesses and the newly developed milkfish cracker home industry will receive guidance and assistance applying food technology, marketing technology, and appropriate technology for milkfish crackers to be widely known and become an alternative to crackers that are suitable for consumption and can penetrate the broader market.

Strategy is essentially planning (planning) and management (management) to achieve a goal. However, to achieve this goal, the strategy functions as a roadmap that shows the direction and must show how the operational tactics are. Therefore, communication strategies need to be structured flexibly so that operational communication tactics adaptively to various influencing factors. Thus, communication goals are achieved effectively. In addition, it is necessary to understand the nature of communication and messages to determine the choice of applying the type of media and communication techniques (Andayani & Achmad, 2020; Santoso, Dewi, Arviani, & Achmad, 2021).

In connection with the marketing strategy of the home industry of milkfish crackers by fisherwomen in the village of Kalanganyar, improvements are needed to penetrate the market and compete with other types of fish crackers that are already circulating in the market. The research team and program partners (KUB Planet Bandeng) agreed on the priority scale for developing the milkfish cracker home industry, namely: (1) Improving the quality of crackers. It is essential to make milkfish crackers with a healthy composition of ingredients with the right mixture to produce recipes and flavors that compete with other fish crackers. (2) Improvement of marketing strategy. The marketing problem is a principal problem concerning increasing the production capacity of milkfish crackers. They need to build and find a suitable marketing network in developing the production of milkfish crackers. It can provide additional guarantees for fisherwomen's income and impact increasing family welfare.



MATERIAL AND METHODS

Implementing the PIHAT scheme service activities takes the form of counseling, training,

and mentoring. In more detail, the model is shown in the following chart:

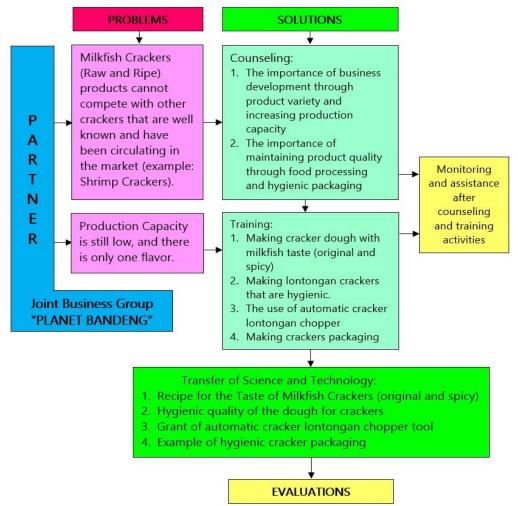


Figure 1. Chart of Implementation Methods for Developing Milkfish Crackers Home Industry in Kalanganyar Village, Sedati District, Sidoarjo Regency.

The team proposing this community activity program consists of (1) Dr. Zainal Abidin Achmad, S.Sos., M.Si, M.Ed.; (2) Dr. Ir. H. Sri Tjondro Winarno, MM.; (3) Dra. Sonja Andarini, M.Si. (4) Ir. Didiek Tranggono, M,Si.; (5) Kusuma Wardhani Mas'udah, S.Si., M.Si. by getting the support of an operational team consisting of three students, namely (1) Arlita Ramadhanty from the Food Engineering Department, (2) Mardani Rizkia Pramudita from the Food Engineering Department, (3) Meilya Syifa Aghniya Rahman from the Communication Science Department.



The task of the operational team is assisting the proposing team in activities: (1) testing the recipe for the taste of milkfish crackers so that they can compete with other types of crackers. (2) explore problems related to low production capacity and product appearance. (3) making video counseling and training (Intellectual Property) so that many people can replicate it (Achmad, 2021). The results of the whole counseling, training, and assistance by the proposer team and the operational team aim to encourage KUB Planet Bandeng's independence to develop production and market their products in a practical and easy-to-understand way, especially during the current COVID-19 pandemic (Sanjaya, Nursandy, Lisvia, & Nurlita, 2021).

As the partner, KUB Planet Bandeng has its participation in implementing the program, they are: (1) Partners strive to increase knowledge about increasing production and business development by understanding the composition according to the recipe to produce flavors that can compete with other types of crackers made from fish or shrimp. (2) Partners strive to have the ability and understand good marketing management, especially in increasing production capacity and quality. Therefore, partners must look for the appropriate management and marketing networks to develop better production of milkfish crackers.

The steps for evaluating program implementation and program sustainability in the field after completing this activity are **Channel Control Strategy**, comes from economics about managing a business-oriented company and the importance of using intermediary product marketing channels, more familiarly referred to as the distribution process. One of the crucial channel control is to control distribution channels so that all intermediaries or members in distribution channels can carry out marketing activities centrally to gain business benefits together (Kirchhoff, 2011; Tranggono, Dwiridhotjahjono, Indira Aryani, & Rasyidah, 2015). Distribution channels should consider the number of intermediaries or members to control the number and distribution needs. For this reason, channeling control usually takes place determining the number of intermediaries or levels of members. Between the producer and the intermediary must agree on the terms and responsibilities of each intermediary or channel member. Some essential things that are agreed upon include pricing policies, conditions of sale, territorial rights or marketing areas, price agreements, and discounts for intermediaries (Silva, Cheung, Vilpoux, & Sanches, 2014).

46



The monitoring step of this activity is **to integrate a sustainable assistance**. Integrated mentoring does not only assist partners in explaining theoretical concepts and applying theory. Instead, it is in the form of training, production, and marketing activities. The PIHAT team accompanies partners, from planning to execution of community service activities. Including the creation of social media accounts as a means of online marketing. All solutions for partners are based on the background capacity, ability, and experience of all members of the implementation team and operational team.

The implementation of counseling and training activities for the empowerment of fisherwomen in developing the Milkfish crackers home industry in Kalanganyar Village, Sedati District, Sidoarjo Regency took place on Wednesday, June 16, 2021, at the Kalanganyar Village Hall. The Head of Kalanganyar Village, Mr. Irham Taufiq, opened a community service activity involving 30 fisherwomen members of the Planet Bandeng Joint Business Group (Radar Sidoarjo, 2021). The plan for the transfer of knowledge in this PIHAT activity takes place through outreach and training activities. Extension activities effectively diffuse innovations for sub-urban or rural communities in Indonesia that have main jobs in the agricultural, agricultural, and plantation sectors (Achmad, Mardliyah, et al., 2020; Tranggono et al., 2020).

RESULTS AND DISCUSSION

The counseling materials consist of: (1) The importance of maintaining the quality of food products in winning the business competition (Ir. Didiek Tranggono, M.Si.); (2) The importance of making an attractive product appearance and hygienic packaging (Ririn Puspita Tutiasri, S.Sos., M.Med.Kom.). The allocation of counseling time is 30 minutes in tutorial presentations and 30 minutes for questions and answers.

The training activity is a hygienic practice of making milkfish cracker dough with original and spicy flavors. During the practice session, the team showing how to operate an automatic cracker lontongan chopper machine. Crackers are one of the favorite snacks of the Indonesian people. Apart from being a snack, crackers are sometimes a side dish. Crackers have various types and ingredients, including rice crackers, skin crackers, shrimp crackers, and fish crackers. Whatever the type of crackers, almost all of them are suitable for the people's tongue. One of the crackers that have the potential to develop is the milkfish cracker. In addition to the



delicious taste, milkfish crackers can serve as a side dish. Here is an easy way to make milkfish crackers.

Development of Flavored Variations of Milkfish Crackers

a. Original Milkfish Crackers Recipe.

How to make Milkfish crackers is easy to practice. Here is how to make original flavored milkfish crackers. The materials are:

- 1-2 kg of milkfish meat, which has been filleted and the spines removed, steamed, then mashed or ground until smooth
- 1-2 kg of sago flour/tapioca
- 250 grams of wheat flour
- 4-5 teaspoons of powdered broth
- 200 ccs of boiled water
- 4 eggs, preferably using duck eggs
- Garlic to taste, puree
- Sugar to taste or about one teaspoon
- Salt to taste
- Pepper to taste (according to taste)

How to cook Milkfish crackers: (1) Make the dough for crackers by mixing milkfish meat with sago flour or tapioca, eggs, sugar, onions, and salt. Keep stirring until well blended or use a stirrer. Add water little by little until it becomes a dough. (2) Roll the dough repeatedly until the dough becomes smooth or not sticky. It is best to knead by hand. (3) Shape the dough into a round and flat shape. (4) Wrap the dough that has been formed using banana leaves/plastic. (5) Steam the wrapped dough until cooked. (6) Remove the dough from the steamer, let it cool for about 24 hours. (7) After that, thinly slice the dough that had been steamed earlier. Dry in the sun until the dough is dry. (8) If the dough has dried or hardened, the dough is ready to be fried. (9) Fry the dough until cooked, remove and drain. (10) Milkfish crackers are ready to eat.



b. Recipe for Spicy Milkfish Crackers.

This training was to offer to make a recipe for spicy Milkfish Crackers. The materials are:

- 1600 grams of tapioca flour
- 1-2 kg of tuna meat (mashed)
- 2 tablespoons salt
- 10 cloves of garlic (crushed)
- 1 teaspoon finely chopped coriander
- 1 teaspoon baking soda
- 600 grams of sugar
- 10 eggs
- 100 grams of dry curly red chili
- Enough water
- Cooking oil

How to Make Spicy Milkfish Crackers: (1) Make the dough for crackers by mixing milkfish meat with sago flour or tapioca, eggs, sugar, onions, and salt. Keep stirring until blended and smooth, use a grinding machine for better result. Add water little by little until it becomes a dough. (2) Roll the dough repeatedly until the dough becomes smooth or not sticky. It is best to knead by hand. (3) Shape the dough into a round and flat shape. (4) Wrap the dough that has been formed using banana leaves and steam for approximately 2-3 hours until the dough looks cooked. (4) Remove the dough and cool, then slice thinly with a manual or automatic chopper, and dry for 2-3 days. (5) Prepare cooking oil over medium heat, then fry the dried cracker dough slices until they look cracked and drain. (6) Store in a jar, and Milkfish crackers are ready to be enjoyed.

Tips for cooking Milkfish crackers so that the milkfish taste is solid and delicious, including: (1) Use fresh fish meat so that the milkfish crackers get a more pungent taste. (2) When forming the dough into a cylinder, grease fingers with cooking oil not to stick. (3) The time to dry the cracker dough is about 2-3 days, depending on the weather and the sun's heat. Make sure to hang it in the sun until it is scorched. (4) If the weather is rainy, the dough can be dried using the oven. First, put the crackers into the oven at 100 degrees Celsius for 1.5 hours. Then,



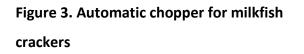
flip each side for 20 minutes. (5) Strain the fried crackers with tissue or paper to reduce the oil content. Air the crackers before storing them in an airtight container.

Appropriate Technology (TTG) Transfer

With the help of the appropriate technology grant, the automatic cracker lontongan cutting tool has been able to increase production capacity up to a maximum of six times. When using manual cutting or chopper tools, the production capacity is only three kilograms a day (figure 2). Since using the appropriate technology machine, the daily production capacity can reach 12 kg to 18 kg a day (figure 3). It depends on the availability of fresh fish raw materials and the amount of lontongan produced.



Figure 2. Manual chopper for milkfish crackers



Channeling Strategy Problem Solving

A qualified product needs to win the competition, Community Service Team Member Dr. Ir. Sri Tjondro Winarno, MM. delivered material about the marketing method of milkfish crackers, according to his experience and expertise in the field of agribusiness. Before the training, the marketing network for milkfish crackers was still thorough; namely, milkfish crackers producers marketed their crackers in raw and cooked form (ready to eat) and sold them to the public by placing them at sellers of processed milkfish or in restaurants and food



stalls, spread over the Sedati district. However, the highest sales were the plain raw milkfish crackers, bought by someone who was then branded by someone else, which does not produce crackers.

Therefore, the description of the marketing model is as follows: The weakness of this simple marketing model is that the marketing reach is minimal and the lack of supervision in terms of product hygiene, taste, price stability, packaging, and promotion. Generally, this marketing model only relies on word-of-mouth promotion, which means that the marketing network is minimal, so there is no increase in the production of milkfish crackers.



Figure 4. New packaging of raw milkfish crackers with variations of spicy taste (red dots) and original taste (green dots)

After receiving counseling, training, and ongoing assistance from April 2021 to August 2021, Mrs. Hajah Halimah as a member of KUB Planet Bandeng, who is own the Riza Jaya brand (not registered as a trademark), has experienced an increase in product quality, production quantity, and sales figures. Through online marketing on Instagram. Now the milkfish cracker business owned by Hajah Halimah is introducing two flavors of krupuk (original and spicy), changing the brand "Riza Jaya" to "Dapur Riza Jaya" (figure 4). They were improving channeling strategies by developing online marketing to overcome the crisis due to the COVID-19 pandemic. The development of cracker flavor variants and brand changes impacts changes in primary packaging, brand stickers, and business logos to be known to the broader community. In general, the milkfish cracker business owned by Mrs. Hajah Halimah



has changed the marketing model into figure 5.

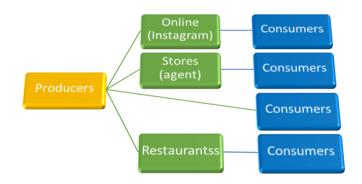


Figure 5. Marketing Model Expands After Training and Mentoring

The post-training and mentoring marketing model show a change in the existence of channels or channels. In the pre-production phase, the community service team assists partners in the production process to ensure the quality of the materials and hygiene factors. In addition, the service team assists in processing quality, taste, production capacity, and packaging process in the production phase. In the post-production or marketing phase, the community service team assists in creating Instagram accounts (figure 6) and procedures for serving, buying, and selling, bringing together agents or shops who are willing to be a display case and a seller of milkfish products. The main goal is to expand the reach of marketing to get more consumers.

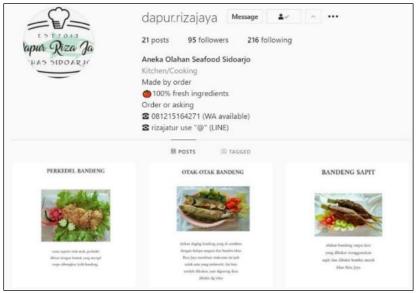


Figure 6. New Instagram account as an online marketing channel



Program Achievement and Follow Up Plan

The output of this community service program is Riza Jaya's Kitchen Milkfish Cracker product with productions that have a variety of flavors, new packaging stickers, and Instagram's online marketing channel. The taste variations include the original taste and the spicy taste. The raw materials use fresh and quality milkfish meat. In addition, the manufacture of these crackers also does not use chemicals as found in various crackers on the market.

The production of milkfish crackers from Riza Jaya's Kitchen uses hygienic principles because in making these crackers, always pay attention to cleanliness, both cleanliness in the product and the place for production. In addition to the things above, according to the testers' opinion, the new Kitchen Riza Jaya Milkfish crackers have the right taste with neat cut sizes and good texture. The provision of new stickers and packaging training on milkfish crackers from Riza Jaya's Kitchen also increased public knowledge about the importance of quality ingredients and attractive packaging.

The follow-up plans for the next program are (1) Regarding the business development plan, the PIHAT Team has agreed with partners to develop a business by managing the Mark Registration and MUI Halal Certificate next year. (2) In the following program, the packaging will be improved by including the benefits of consuming milkfish, which provides omega-three proteins that increase brain intelligence and ward off degenerative diseases. (3) The development of channeling strategies from the beginning has been carried out in several ways: door to door, selling on Whatsapp and Line, participating in exhibitions, and depositing them in gift shops. The subsequent development is placing it on the Tokopedia and Shopee marketplaces. (4) Development of making business profiles, namely product videos.

CONCLUSION

Based on the results of the implementation of community service activities, the conclusions are: Prior to counseling, training and assistance by the Community Service Team, fisherwomen who are members of the Planet Bandeng Joint Business Group: (1) still carry out the production process of milkfish crackers with manual equipment and pay less attention to the quality of materials and hygienic production sites, (2) are not familiar with the variety of



flavors in making milkfish cracker dough ingredients, (3) the marketing channeling strategy still uses traditional channels, such as word of mouth, door to door, and direct marketing to consumers.

After receiving counseling, training, and mentoring there have been changes made by fisherwomen in developing their businesses. (1) using a cracker lontongan cutting machine to increase production capacity, (2) paying attention to hygienic factors in the process of making ingredients to packaging crackers, (3) in addition to successfully getting support from several stores, partners have used Instagram's online marketing channel to expand the market and increase consumers.

With the abundance of milkfish production in Kalanganyar Village, fisherwomen members of KUB Planet Bandeng can make various creations of processed food products made from milkfish, to increase their income. Some of the processed food creations that have been successfully developed by the fisherwomen include milkfish brains, grilled milkfish, smoked milkfish, presto milkfish, thornless milkfish, milkfish sapit, milkfish nuggets, milkfish soy sauce, crispy milkfish, and milkfish satay. The goal is milkfish has a higher economic value.

ACKNOWLEDGMENT

This work financially supported by The Institute of Research and Community Service Universitas Pembangunan Nasional Veteran Jawa Timur (LPPM UPNV Jatim) through "Dana Internal 2021". Therefore, authors are grateful for this funding and support of this research.

REFERENCES

- Achmad, Z. A. (2021). LPPM UPNV Jatim, Pengembangan Usaha Home Industry Krupuk Ikan Bandeng Desa Kalanganyar Sidoarjo. Retrieved 18 March 2022, from https://www.youtube.com/watch?v=zKidTSIBDgU&t=3s
- Achmad, Z. A., Azhari, T. Z., Esfandiar, W. N., Nuryaningrum, N., Syifana, A. F. D., & Cahyaningrum, I. (2020). Pemanfaatan Media Sosial dalam Pemasaran Produk UMKM di Kelurahan Sidokumpul, Kabupaten Gresik. *Jurnal Ilmu Komunikasi*, 10(1), 17–31. doi:10.15642/jik.2020.10.1.17-31

Achmad, Z. A., Mardliyah, S., Siswati, E., Luawo, S. R., & Wahyudi, A. (2020). Menumbuhkan



Upaya Diversifikasi Usaha Melalui Penguatan Ketrampilan Pada Komunitas Koperasi Wanita Nelayan Di Gresik. *Jurnal Abdimas Bela Negara*, 1(2), 1–14. doi:10.33005/jabn.v1i2.18

- Andayani, T. J., & Achmad, Z. A. (2020). "Parenting with Rumah Keluarga Risman" Facebook group as information society and determinant of technology function. *Indonesian Journal* of Social Sciences, 12(02), 62–72.
- Bisowarno, S. U., & Untari, S. (2019). Pemberdayaan Perempuan dalam Perspektif Modal Sosial (Studi tentang Pemberdayaan Perempuan melalui Kegiatan Perkoperasian di Koperasi Setia Budi Wanita Kota Malang). Universitas Brawijaya Malang.
- BPS Kabupaten Sidoarjo. (2020). *Kecamatan Sedati dalam Angka 2020*. Sidoarjo: BPS Kabupaten Sidoarjo.
- BPS Kabupaten Sidoarjo. (2021). *Kabupaten Sidoarjo Dalam Angka 2021*. Sidoarjo: BPS Kabupaten Sidoarjo.
- Hardjosoewito, S. (2009). Penguatan Kelembagaan Masyarakat Pesisir di Jawa Timur. *Repository.Untag-Sby.Ac.Id*, 1–11.
- Humphries, J. (1993). Gender Inequality and Economic Development. In *Economics in a Changing World* (pp. 218–233). Macmillan Education UK. doi:10.1007/978-1-349-22988-8_12
- Kirchhoff, S. M. (2011). Advertising industry in the digital age. *Advertising: Developments and Issues in the Digital Age*, 1–25.
- Mardliyah, S., & Achmad, Z. A. (2017). *Binary Opposition in the Educational Study in Indonesia: Non Formal Education Deconstructs Formal Education*. In *International Conference on Education Innovation (ICEI)* (pp. 772–777). Surabaya: Faculty of Education, Universitas Negeri Surabaya.
- Mas'udah, K. W., Achmad, Z. A., Chayani, I. S. P., Multazam, N. A., & Putra, R. F. A. (2021). Pelatihan desain pengemasan dan pemasaran kelompok UMKM untuk meningkatkan pendapatan masyarakat Kelurahan Dupak Kecamatan Krembangan Kota Surabaya Jawa Timur. *SHARE (Journal of Service Learning)*, 7(2), 129–135. doi:10.9744/share.7.2.129-135

Ogden, L. E. (2017). Fisherwomen-The uncounted dimension in fisheries management.



BioScience, 67(2), 111–117. doi:10.1093/biosci/biw165

- Pasda, S., Bado, B., & Hasbiah, S. (2019). Model of Poverty Reduction by Strengthening Institutional Cooperatives for Coastal Areas of South Sulawesi. In 1st International Conference on Materials Engineering and Management-Management Section (Vol. 75, pp. 255–259). doi:10.2991/icmemm-18.2019.34
- Prabowo, B., Tranggono, D., & Nuryananda, P. F. (2019). *Society Empowerment Using Assistance 6 in Tasikmadu with Bakso Ikan*. In *NST Proceedings* (Vol. 4, pp. 185–190). Surabaya: ISRM LPPM UPN Veteran Jawa Timur. doi:10.11594/nstp.2019.0426
- Radar Sidoarjo. (2021). Pelatihan Pembuatan Adonan Kerupuk Ikan Bandeng Bervarian Rasa di Desa Kalanganyar, p. 10.
- Rizkiyah, T. A. (2019). *Pemberdayaan Perempuan Buruh Tambak di Desa Kalanganyar Kecamatan Sedati Kabupaten Sidoarjo*. Universitas Islam Negeri Sunan Ampel Surabaya.
- Sanjaya, A., Nursandy, F. L., Lisvia, L., & Nurlita, Y. S. (2021). Pemanfaatan Digital Marketing
 Dalam Memasarkan Produk di Masa Pandemi Covid-19. *PLAKAT: Jurnal Pelayanan Kepada Masyaralat*, 3(2), 167–181. Retrieved from http://e-journals.unmul.ac.id/index.php/plakat/article/view/6741/pdf
- Santoso, N. R., Dewi, E. A. S. K., Arviani, H., & Achmad, Z. A. (2021). Public Relations Professionals' Communication Strategies in Responding to the COVID-19 Pandemic Based on Gender. *Plaridel*, *18*(1), 295–316. doi:10.52518/2021.18.1-08saderac
- Silva, G. G., Cheung, T. L., Vilpoux, O. F., & Sanches, F. T. (2014). Social capital and cooperation in the family farm: a comparative analysis between the state of Mato Grosso do Sul and Santa Catarina. *Organizacoes Rurais e Agroindustriais*, *16*(2), 153–166.
- Sugihamretha, I. D. G. (2020). Respon Kebijakan: Mitigasi Dampak Wabah Covid-19 Pada Sektor Pariwisata. Jurnal Perencanaan Pembangunan: The Indonesian Journal of Development Planning, 4(2), 191–206. doi:10.36574/jpp.v4i2.113
- Thomas, J. (1988). Women and Capitalism: Oppression or Emancipation? A Review Article. *Comparative Studies in Society and History*, *30*(3), 534–549. doi:10.1017/S001041750001536X
- Tranggono, D., Djajati, S., & Andarini, S. (2016). *Empowering Fisherwoman in Business* Development Meatballs Mussels in Bluru Kidul Village, Sub-District Sidoarjo Residence



Sidoarjo. In ICRM (pp. 326-330).

 Tranggono, D., Dwiridhotjahjono, J., Andarini, S., & Rasyidah, R. (2017). Women Fisherman Empowerment Based on Local Potential in Sidoarjo: Social Entrepreneurship Approach. In Nusantara Science and Technology Proceedings (pp. 1–5). Surabaya: ISRM LPPM UPN
 Veteran Jawa Timur. Retrieved from https://nstproceeding.com/index.php/nuscientech/article/view/3

- Tranggono, D., Dwiridhotjahjono, J., Andarini, S., & Rasyidah, R. (2018). Empowerment of Sidoarjo Women Fishermen: Coastal Srikandi on Potential, Condition, and Intention. *The International Journal of Business & Management*, *6*(8), 73–80.
- Tranggono, D., Dwiridhotjahjono, J., Indira Aryani, M., & Rasyidah, R. (2015). Development formulation of crafts weaving batik ikat East Java: Strategic block and interconnection. *Journal of Economics, Business & Accountancy Ventura, 18*(2), 167. doi:10.14414/jebav.v18i2.445
- Tranggono, D., Nuryananda, P. F., Yusuf, A., Putra, T., Kidul, B., & Sidoarjo, K. (2020). Pemberdayaan Perempuan Nelayan Dalam Peningkatan Produksi Krupuk Kerang di Desa Bluru Kidul, Kecamatan Sidoarjo, Kabupaten Sidoarjo. *Jurnal Abdimas Bela Negara*, 1(1), 20–28.
- Wu, Y.-C. C., Chen, C.-S. S., & Chan, Y.-J. J. (2020). The outbreak of COVID-19: An overview.
 Journal of the Chinese Medical Association, 83(3), 217–220.
 doi:10.1097/JCMA.00000000000270
- Zulham, A., Hikmah, Shafitri, N., & Yuliaty, C. (Eds.). (2020). *Pemberdayaan Perempuan dan Kematangan Gender Kelompok Usaha Perikanan* (Vol. 148). Bogor: IPB Press.