

Milkfish Fish as a Business Opportunity Kalirejo Community, Gresik Regency

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Abstract

One of the problems experienced by farmers community fish ponds in the village of Kalirejo, Dukun Sub-district, Gresik Regency is the value of the selling price of fish that tend to be cheaper and the lack of information systems in marketing. So far, people only sell milkfish to the local dukun market and lack of innovation done in sales promotion. The community is less fond of milkfish because it has a lot of thorns, but on the side of excess milkfish has many high nutrients, especially omega-3 unsaturated fatty acids and protein content of 20. In connection with this, this activity aims to increase the selling value of milkfish in the market through training activities to pull out the fish's milkfish and diversification products. The method used is training and mentoring activities to pull out the milkfish spines to produce products that have higher selling value, this activity is done by the villagers Kalirejo especially women and housewives, as well as the surrounding community who have the desire to entrepreneurship. The result is a fish without briber can be sold to consumers or processed into new products that are more popular, such as meatballs, nugets, elephant legs and so forth. The conclusion is that unbraced banding fish has a very lucrative business opportunity with the increase of selling price if it can innovate by pulling out milkfish spines and in making a new product, so as to increase the appeal of people to consume milkfish without the need to think about the thorns that exist in the flesh of milkfish, as well as increasing the income of the fish farmers in Kalirejo Village, Dukun Sub-district, Gresik Regency.

Keywords: product diversification, selling price, fish without burr, fish ponds

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Introduction

One of the economic potential in Kalirejo Village, Dukun Subdistrict is fishery field, that is milk fish breeding. Milkfish nutrition is quoted from www.Organisasi.org, Milkfish contains energy of 129 kilo calories, 20 grams of protein, 0 grams of carbohydrates, 4.8 grams of fat, 20 milligrams of calcium, 150 milligrams of phosphorus, and 2 milligrams of iron. In addition, in Fish Milk is also contained as much as 150 IU of vitamin A, vitamin B1 0.05 milligrams and vitamin C 0 milligrams. The results obtained from the research on 100 grams of Milkfish, with an amount that can be eaten as much as 80%. According to research of development and research of quality and fishery in 2004, omega3 content of milkfish is 14.2% more than salmon (2.6%), tuna (0.2%) and sardines / mackerel (3.9%). Based on the results of these studies are very good milkfish

for consumption, especially children in the growth period.

In Indonesia especially in Gresik, milkfish is more easily found in the market compared to other fish and is favored because it has a tasty taste, the taste of meat is chewy, and also not easily destroyed when processed. However, milkfish has enough bones and sometimes smells of mud.

The fine bones or spines on the milkfish are quite disturbing when consumed. So, there are fears swallowed when eating food menu made from raw milkfish. The number of thorns or fine bones found in milkfish is on the back there are 42 pairs of branched spines attached to the meat near the outer skin surface, the chest there are 12 pairs of short spikes, the abdominal cavity there are 16 pairs of thorns, and the abdomen near the tail there are 12 pairs of small thorns. This problem causes consumers, especially people in the village of kalirejo only a few who like, buy and eat milkfish.

Keadan This resulted in the price of milk fish in the market is very cheap, which is the price of 1 kg of milkfish is only worth Rp 25.000 / kg. This price is very cheap when compared with the price of other marine fish such as mujaer fish which ranges Rp 35.000 / kg.

People in the village of Kalirejo Dukun sub-district are mostly farmers of milkfish ponds, the result of harvesting milkfish directly sold to traditional markets as a result of their economic income, dan sebagian menyewakan tambak mereka untuk dikelola orang lain. The fishpond depends on the demand, so the seed stocking depends on the number of orders. Because milkfish products are sold to traditional markets as well as to meet local needs. In addition, smallholder farmers in Kalirejo Village manage a small portion of the milkfish to be presto milkfish. The presto milkfish is the result of the work program of KKN students in Kalirejo Village before our group from Muhammadiyah University Gresik came.

According to our diversification of milkfish products into presto milkfish is less innovative and less have the competitiveness of the market, because the manufacture of presto milkfish only relies on tools that are easy to find in the store household appliance, in addition to this presto milkfish can not be processed again into a product another and this will cause a sense of boredom to consumers. Based on that we want to increase the economic value of natural resources of Kalirejo Village ie milkfish into milkfish products without thorns.

Uncorned milkfish is a semi-finished fishery product in the form of fresh raw milkfish that has been discarded bones and thorns. The advantages of this thornless milkfish is not to reduce or eliminate the nutrient content found in milkfish, because the processing is only to remove the spines that exist in milkfish, not cook it. Products without briber can be sold immediately with a price range of Rp. 50.000, - / kg, besides milkfish products can also be utilized into various food variations. Some processed products from milkfish without thorns include milkfish nuggets, milkfish meatballs, milkfish, milkfish fillets and so forth. Therefore, it is necessary to increase entrepreneurship motivation in rural community of Kali Rejo, such as the wife of farmers to get skill to revoke milkfish thorn and diversification of processed

milkfish products that can increase the selling value and economic value of milkfish so that it can improve the economy of the community especially in Kali Rejo Village, Dukun Sub-District, Gresik Regency.

The purpose of this KKN activity is to help the community of Kalirejo village to give the value of the selling price of milkfish as a business opportunity through training activities to pull out the milkfish spikes and continue the diversification of milkfish products without thorns into a product that is worth selling. Breeding fish processing without thorns is one of the new innovations in the world of fisheries. The way of processing is quite simple just use the main tool tweezers to pull out the spikes of milkfish. This tool is also found in many pharmacies while other supporting tools are also not difficult to find, namely plastic bags of containers or brass, knives, and cutting board. The villagers of Kalirejo village were trained in the poses of the revocation of milkfish thorns and continued verifiable milkfish without any thorns into a new product of milkfish meatballs. The result of fish processing in the form of milkfish without further thorn can be marketed or in supplied to supermarket or restaurant to be processed back into various menu.

Method

The location of KKN implementation activity is in Kalirejo Village Hall, Gresik Regency. This location was chosen based on information that has been submitted by the Village Head Dukun that in the village of Kalirejo many people who have business fishpond milkfish. Participants in the implementation of this activity are housewives, milkfish farmers, and communities around the village Kalirejo who have motivation to entrepreneurship and willing to follow the activities. Community efforts have been done recently in the pond business by selling milkfish to the local shaman market without diversifying the product. In relation to this the group held a training of milkfish withoutdraws and then diversified products. In this process the materials used, namely the fresh milkfish harvest. Processed ingredients of milkfish products, namely tapioca flour ingredients, spices, and water. Tools used, namely tweezers, knives, cutting boards, plastic bags, baking pans, and pans.

Method of implementation, which is the activity begins with consultation with the government of Kalirejo Village as the location of KKN. Briefing is given by Mr. Badrun as the speaker about the method of plucking fish milk spines and milkfish processing practices. The implementation stage of the activity is done in Kalirejo village hall, through two stages of training and mentoring. 1) Training to pull out the fish milk spines and process them into various products. This activity is followed by housewives, beginning with the provision of training materials by Mr. Badrun as resource person KKN program-about the nutritional value of milkfish, milkfish morphology structure, and the position of thorns that exist in milkfish. The method of plucking fish burrs is done in sequence according to the stage starting from the easiest part to the most difficult part. First is the spinal/spine removal/retraction. Bone broken on the tail then pulled up to the head, the meat of the fish is pressed so as not to come pulled up to the head. Next is the removal of thorns in the chest area near the head (12 pairs of thorns), 16 stomachs, 16 spines (42 spikes on the left side and 42 on the right) beginning at the front near the gill cap, near the base of the tail of 12 thorns.

The cutting of the dorsal fin begins from the base of the back until the fins are released. Tasting is done to make sure the thorns have been pulled out. 2) Assisting the skill of pulling out the milk spikes and processing them into other processed products such as meatballs, this activity is accompanied by students of KKN. The method used is the practice of milkfish fish extraction and management of milkfish products into meatballs. Meatball making step begins with grinding fish flesh that has been revoked durian, then mixed with seasoning meatballs that have been prepared by the participants in accordance with the direction of the speaker, then cook water in a pan cultivated not to boil so that the nutrient content in fish is maintained, then the meat of milkfish fish is ready to be molded into meatballs.

Results and Discussion

Activities undertaken

This activity was carried out with the initial consultation of the village head to ask permission to conduct this KKN program so that the activity will run smoothly and get good response from the

local people. After getting permission from the village head. Next we prepare what is needed in the implementation of this KKN program with the theme "Workshop Making and Managing New Products" such as the speakers in the event, target audience in the event. training to revoke milkfish bones and milkfish product diversification into new products in collaboration between KKN students with the village apparatus Kalirejo namely the head of the village and the head of PKK on Sunday morning at 08.00 WIB. The people who attended were, PKK and villagers. KKN programs get a positive response from the community.

Community training and mentoring activities were conducted on September 10, 2017 with a total of 35 participants. This activity was conducted at the Village Hall, in Kalirejo Village, Dukun Sub-District, Gresik Regency. The training is entitled "Workshop Making and Managing New Products". The training was held for one day, beginning with a brief presentation by Mr. Badrun as the speaker. Training materials include the nutritional value, the position of thorns, and how to pull out the thorns, and the introduction of tools and materials.



Figure 1. Submission of the material

Furthermore, people are given knowledge about the selection of fresh fish to be one of the strategies in starting a fish business without burrs because it includes quality in the product itself. Here are the characteristics of the difference in fresh fish of high quality and low quality.

Parameter	High Quality	Low Quality
Eye	Bright, protruding eyeballs, clear corneas	Concave eyeballs, milky white pupils
Gill	Brilliant red color, no lenders	Color is dull, and slimy
Mucus	Clear, transparent, bright shiny mucous layer, no	Mucus is yellowish to thick brown.

Parameter	High Quality	Low Quality
	color change	bright colors are gone.
Meat and Stomach	The meat incision is very bright, original color, no milking throughout the spine, whole stomach, bright red kidney, meat intact wall intact, fresh stomach odor	Dull meat cutlet, clear red color along the spine, abdominal wall dispersed, foul odor.
construction	Fresh, smelly seaweed, specific odor by type	Smelly
Consistency	Solid, elastic when pressed with a finger, it is difficult to tear flesh from the spine	Very soft, fingerprints will not disappear when pressed, easy to tear the flesh from the spine

After the material is delivered Continue with doorprize division session so that participants are not saturated and can spirit back to follow the event nets. There are 10 doorprizes prepared by KKN team by means of two sharing sessions in the middle of the event and at the end of the event, provided that the participants who are entitled to get door prize are active participants who want to ask and can practice how to pull out the fish banding fish correctly according to the material that has been submitted by Mr. Badrun as the speaker.



Figure 2. Door prize distribution

The practice of plucking the spikes of milkfish using tweezers by following the morphological structure and position of milkfish spines. The practice of plucking milkfish bone is assisted by KKN students.



Figure 3. Process of weeding and spinning milkfish.

The third stage is milkfish without thorns can be processed into a variety of products one of which is meatballs.



Figure 4. Milkfish-ball processing.

The steps taken are from weeding, removal of thorns, fish processing and packing fish are described as follows.

Weeding of milkfish

The process of weeding milkfish is done as follows: 1) Fish is washed by using running water so that dirt and fishy odor attached to the surface of the skin can be joined along with the flow of water and reduce the number of microorganisms; 2) Milkfish split on the back like a butterfly from head to tail base, and cultivation does not cut the

backbone; 3) Milkfish cleaned by throwing all the contents of stomach, dirt, and gills, so as not to cause bitterness at the time of the fish through the processing stage; and 4) Milkfish washed for a second time to keep the milk completely clean from the blood remnants.

There are 3 (three) concentration centers in fish, namely the contents of the stomach, gills, and skin. the best technique is to spray the fish, especially the inside that has been weeded with water that keeps flowing to prevent the collecting of pollutants (vatria 2010)

The revocation of milkfish spines

The stages required during the process of extraction of spines on milkfish as follows materials used are fresh milkfish, ice cubes and clean water. While the equipment used is tweezers, basins, plastic bowl, slicer basket, PE plastic, hand sealer, knife and cork.

The revocation of milkfish spines is done sequentially according to the stage or can be started from the most easy to get to the most difficult part, starting from the backbone first, then continued with other smooth spines. The first stage of disposal of the spine / spine is pulled from the tail to the head, the meat of the fish is pressed so as not to come pulled up to the head. The next stage is the removal of thorns in the chest area near the head (12 pairs of thorns), 16 thorn stomachs, 42 spines of briers dobbled in fish meat near the outer shell on the left side and 42 spines on the right side. The removal of the thorn begins at the front near the gill cover, the thorn near the base of the tail of the 12 thorns.

Next is the process of cutting the dorsal fin begins from the base of the back until the fins off. The strain was done to ensure the thorns had been removed. After the thorns are pulled out all the milkfish without thorns ready to pack at a temperature of -18 degrees Celsius. The pulling of thorns from one of these fishfish takes approximately 15 minutes. If we are skilled then pull out one fish can be completed within 10 minutes, so that within 1 hour can be completed the lifting of 5-6 fish of milkfish.

Processing fish without burrs

Milkfish can be packed directly and sold, but fish that have been revoked briquettes can be

developed into new products such as *Nugget Bandeng* (Saparinto 2007) directly packed and marketed. In addition to being used as a bandless Nugget milkfish it is also biased further verified into milkfish milkballs (Waridi 2004). Bakso is made by adding tapioca starch about 10 - 15 from the weight of the fish used. Another important ingredient used in the manufacture of fish balls is ice cubes or ice water. Spice meatball in the form of salt while seasoning seasoning is made from a mixture of garlic, onion and pepper / pepper.

The management of fish without brige into milkfish meatballs is quite easy and does not take a long time, the process of making milkfish takes about 30 minutes. Stages in the manufacture of fish balls fishballs are as follows: 1) meat fish without briber fish separated from the skin because it is taken only the flesh of milkfish itself. 2) make a meat fish meatfish and spices into the blender to mix. 3) prepare the water to merub the meatball dough with medium fire so that the nutrient content of milkfish is not lost. 4) form the meatball dough with a circle shape and insert it into boiling water, let the meatballs expand to the pan. When the meatballs have been expanded meatballs can be drained and meatballs ready to be enjoyed.

Packing of milkfish without thorns

Packaging is done to prevent the occurrence of contamination from the outside is also to attract consumers is by using PE plastic (polyEthelene) is a waterproof plastic material, odorless, plastic slightly opaque and transparent, impact resistant, durability up to 135 degrees Celsius with size 30cm, stage then the milk that has been put into plastic ready in the press by using hand tool sealer. In addition, also to prevent the occurrence of dehydration products due to frozen storage.

Dehydration results from the withdrawal of water content from within the product due to the difference in moisture (Winarno 1993). As a result of withdrawal of water or dehydration cause fish to be dry. Storage of fish without burrs. The purpose of storage is to keep the durability of fish maintained, in the storage temperature freeze, so that the final product does not experience decay. According Oktavianti (2016) that fish easily suffered damage caused by bacteria. Milkfish will be damaged if only left at room temperature for 12 hours (Rofik & Rita 2012), so it takes effort to

increase the powersave and durability of fishery products through processing and preservation which one of them is by cold storage Oktavianti (2016). Therefore, storage needs to be -18C or lower, but the enzyme development is still running slowly. The enzyme growth temperature ranges from -50-50 C (Winarno 1993).

Excellence and Market Opportunity Fish Milk Without Thorn

The fish can be shipped in various provinces even the blight can be used as a typical culinary product on the island of Java, especially in eastern Java in Gresik regency, but the society is currently less interested to consume milkfish because there are too many fish bunches including the community of Kalirejo village. From the Research (Yayan & Hertria, 2014) with the title "Milk market development strategy" the results explaining the nutritional content found in fish meatfish have 40% protein almost similar to salmon. In addition, it is seen from the comparison of salmon fish with milkfish, milkfish tend to be cheaper. So most likely consumers prefer milkfish with the assumption of the same protein and more economical prices.

Besides the benefits of fish that are cheaper than salmon, there is a shortage in terms of the number of thorns in the meat of milkfish so there is a need for innovation. The new innovation in processed fresh milkfish today is milkfish without thorns with the existence of this technology of thorn removal will ease the process of management of milkfish without thorns and can be a solution to the problem.

The market opportunity of this fish without burrs is a tantalizing business choice, this milkfish business is very suitable to be done by the housewife because the process is easy and simple withdrawal only with tweezers that can be found in various pharmacies. The results of this product without briber can be re-processed into several new products again such as meatballs, nuggets, fillets and in the process of presentation is also easy. While the nutrient content that is in the milkfish without the thorns will also not be lost because we just pull out the thorns that exist in milkfish so the mothers do not have to worry about the nutrient content of milkfish.

Kalirejo village there are many fish ponds so that the potential for milkfish products (Batari) very good because the kit adapts easily to obtain fresh milkfish that can be processed directly into milkfish without thorns without the need for a special place for keeping the milkfish fresh. Kalirejo village is suitable as a supplier of milkfish and at the same place where milkfish products (Batari) and it can be verified into fish meatballs milkfish.

Ability in obtaining raw materials become a key to success in a business because we can easily obtain the raw material, so it can be faster to process and no need to spend other costs such as transportation costs. Milkfish that will be processed into milkfish without briquettes are milkfish measuring about 300-330 grams per pieces or 1 kg which contains 3 milkfish. If the milkfish is too small, then it will make difficult in the process of revocation of the thorn and the community also does not like small milkfish.

The Benefits of Fishless Milkfish Business

The results of Wahyu's research in the title "Analysis of the determination of the cost of goods and selling price on the cultivation of salted milkfish fish by pond farmers in Talanganyar village, Sedati subdistrict, Sidoarjo regency". Based on the result of the research, it is concluded that the basic price of saltwater fish culture is good and according to the existing theory, but it has not been used as the basis of selling price determination because the selling price is less suitable with the pond farmer's theory, expected, but only based on current market prices.

Based on the price of milkfish in the market today is about 25.000/kg, but after the milkfish is processed into milkfish without burr (Batari) the price can be doubled with regular bendeng fish that is about 50.000/kg even people feel satisfied and happy with the product milk without thorns (Batari) because they do not have to worry about the fish balls of about 165 spines. In determining the price of fish without briber, the KKN team considered aspects such as milkfish price and production cost, that is the wage of milkfish fish and the process of packing the cost. the revocation of milkfish can be specified as follows 1kg milkfish which have 3 fish is 20.000 while packaging cost 5000 range for mica purchase and

mica pressing, so considering those aspects then the price of milk fish without thorn to per 1kg is 50.000.

So, if someone can work from 08.00 - 13.000 for the lifting of milk briquettes (1 hour can pull out 1-2 kg) then can earn income around Rp100.000 - Rp 200.000 in half day.

Barriers / Constraints Program

Obstacles/constraints in the implementation of work programs students KKN in Kalirejo Village, namely: 1) In the beginning people are less interested in Batari workshop activities. This is due to the same time with the various activities of the community with other activities that have been pre-programmed and working hours from morning to evening. 2) lack of patience in pulling out the milkfish spines so that not only the thorns are pulled off the meat fish flesh as well. Many mothers who fail, especially mothers aged 50 and above because of vision that has been blind. This incident will affect the neatness and shape of the bandneg fish. The solution is a young workforce such as teenagers or young mothers to remove milkfish spines because vision is still normal and painstaking; 3) because these fish are seasonal fish will become an obstacle in meeting the existing demand and the price of milkfish can be increased even the price of milkfish will vary. 4) Another obstacle is the durability of milkfish that can not last long if the packaging and storage process using a manual or traditional technology such as ice box, because the fish without briber is completely pure without any preservatives. Susilowati and Reskiati (2015) stated that in general food is perishable, because the water content contained therein is the main factor causing the food damage itself. Water high enough The higher the water content of a food, the greater the likelihood of damage both as a result of internal biological activity (metabolism) and the entry of microb destroyer. Levels contained in the fish body, which is about 60-84% makes the fish into a medium suitable for bacterial growth (Afrianto & Evi 2011).

Solution in solving the above problems is as follows: 1) Motivate the community by introducing natural resources and provide direction in the management of milkfish is infative like milkfish without thorn. 2) provide training gradually and the community is encouraged to practice directly in the

revocation of milkfish spines so that people will be familiar and easier in the management of milkfish briquettes. 3) conducting intensive milkfish cultivation with continuous seed supply business with good quality to meet market demand. 4) in cooperation with village officials in packaging and storage techniques using vacuum machines that can extend the durability of fish without burrs to be durable until within 1 month with the condition of din gin and keep fresh.

Sustainability Program Plan

It is hoped that KKN program in Dusun Kalirejo, Dukun Sub-district, Gresik Regency is able to explore and develop the potential of fisheries into new products that can benefit the community and can increase economic income for farmers and housewives in order to have expertise can develop the business started from the home industry and is expected to develop business in a larger level and able to improve the economy of the villagers of Kalirejo Village, Dukun Subdistrict. So that we can utilize the natural resources for the welfare of society.

Conclusion

Milkfish processed into milkfish without burr and verified into new products such as meatballs. This activity is an innovation that can be a business opportunity in increasing the economic income of Kalirejo Village community by utilizing the existing natural resources in Kalirejo Village, Dukun Sub-District, Gresik Regency

The process of milk briquette disturbance is using a simple tool that is with tweezers that can be found in various pharmacies. This business is very suitable for housewives to fill the vacancy time, the productivity of this business depends on the intention and seriousness of the community itself to open business opportunities in addition to the ability of people in the process of the revocation of milk spines, because the patience, and experience then the process the removal of thorns will be faster, easier and produce the best.

Constraints faced in the business of fish without burrs is the stock of raw materials that are seasonal, so it will be difficult in determining the price because later on the price of milkfish will vary.

Suggestion

Community of Kalirejo Village to increase knowledge related to fisheries one of them is milkfish with increasing science expected kalirejo villagers more creative and innovative to utilize existing natural resources and process them to have more value. Local Government in Kalirejo Village, Dukun Sub-District, Gresik Regency, such as Fisheries and Marine Office, need to conduct a process of pulling thorns and milkfish processing without thorns so that people will be more interested and enthusiast to run a milkfish business.

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