

PRODUCTION OF VALUE ADDED FISH PRODUCTS – A POTENTIAL BUSINESS FOR COASTAL WOMEN

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Abstract: Mainly in the coastal regions of Tamil Nadu, the fisherwomen make their livelihood by playing the role of the vendor which is usually not economically viable. As they have to sell the catch within that particular day, sometimes they have to sell it at the basic cost which doesn't even cover their expenses as raw fish does not have a longer shelf life until it is hygienically stored. In order to prevent this and also to increase the margin of their income, they can take up value addition of seafood products. Some easily manufactured value added seafood products are fish pickle, fish incorporated pasta, fish incorporated noodles and Ready-To-Eat Fish curry, for which the manufacturing procedures are described below. This not only increases the income of the fisher women but it will also increase the people who consume fish in one way or other. This value added fish products nutritionally enriches the foods and gives health benefits to the consumers at the same time. In addition, the upcoming generation prefers to explore new products that are easily available and readily feasible. Therefore, this field proves to have a wide range of opportunities for the entrepreneurial development among coastal women helps to enhance their personal capabilities and societal improvement.

Keywords: Fisherwomen, entrepreneurs, social development and value added fish products.

INTRODUCTION

For the people around the world, fisheries play a major role in the nutritional security and in food production. Fish is known for its high nutrition as it has various essential micronutrients, minerals and fatty acids. As India has a vast coastline, it is the second largest producers in the World. There are more than 10 million of people involved in this sector for making their livelihood in nearly 4000 coastal regions (Indian National Fishery Sector Overview). Tamil Nadu contributes 7.32 % to the overall national production. In which, Nagapattinam district provides 18%. The capacity of the income generation of an individual is directly related to the development of the society. In Nagapattinam, the livelihood of the major population depends on the fisheries. Industrialization, urbanization and technical change are the solution that can encounter the problem of both proper utilization of raw

materials and of the manpower which would also enhance their living condition (Kiranjot Sidhu and Sukhjeet Kaur; 2006).

Women are known for their multi talent, tackling both the indoor and outdoor activities without much effort. In the local markets of the coastal regions, the fisher women are tending to be vendors to sell the catch of that day. Most of the times, the women are forced to sell it at a lower cost as the fresh and raw fish does not have a long shelf life. In order to prevent this issue and to improve the living condition of the coastal women there are various methods like that of bakery, dried and thermal treated products and pickles can be followed.

MATERIALS AND METHODS

In order to know the involvement and the profit gain obtained by the fisherwomen from the various villages of Nagapattinam a study was conducted. The study involved the five group numbered fisherwomen from villages of Keechankuppam, Akkaraipeitai and Nagore from Nagapattinam. They underwent a training program for preparation of fish pickle, fish curry, fish incorporated pasta and noodles in Fish Processing Incubation Centre, College of Fisheries Engineering, Nagapattinam.

Materials

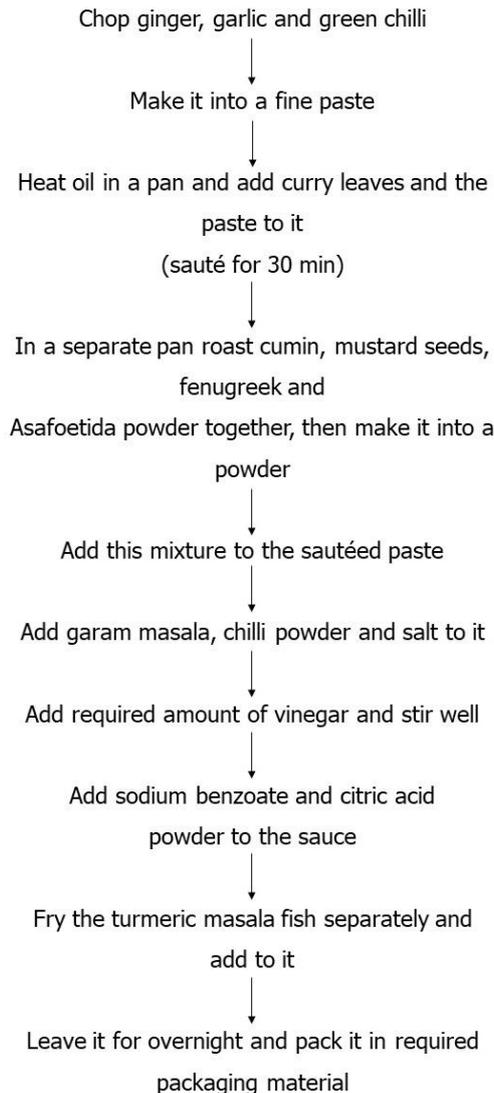
The ingredients for the manufacture of the products are purchased from a local shop in Nagapattinam. The fishes used are Red snapper and Tuna which are also purchased from the local fish market of Nagapattinam.

Methods

To make know about these opportunities available awareness was created among the coastal women regarding the nutritional benefits of the seafood and the business opportunities present in the value addition of seafood products. Later, to motivate the coastal women various psychological stimulation was given through social, economic, videos and the health benefits about these value added seafood products. Further to develop expertise, these women were trained to acquire skill upgradation, knowledge in areas of marketing, skills in production, processing and packaging, among which the procedure for the production of fish pickle, fish curry, fish incorporated pasta and noodles are mentioned below. To ensure sustainability, continuous follow up of these groups were done with help in technical skills and knowledge.

Fish Pickle

In food, process of extending the life span or preserving can be done by pickling. This can preserve the perishable food items for months as it has a low pH. The food's flavour, texture and taste is impacted by the process of pickling. The ingredient like mustard seed and garlic which are utilized has antimicrobial properties. The flowchart 1 below describes the preparation of fish pickle which can also be followed for the preparation of prawn pickle.

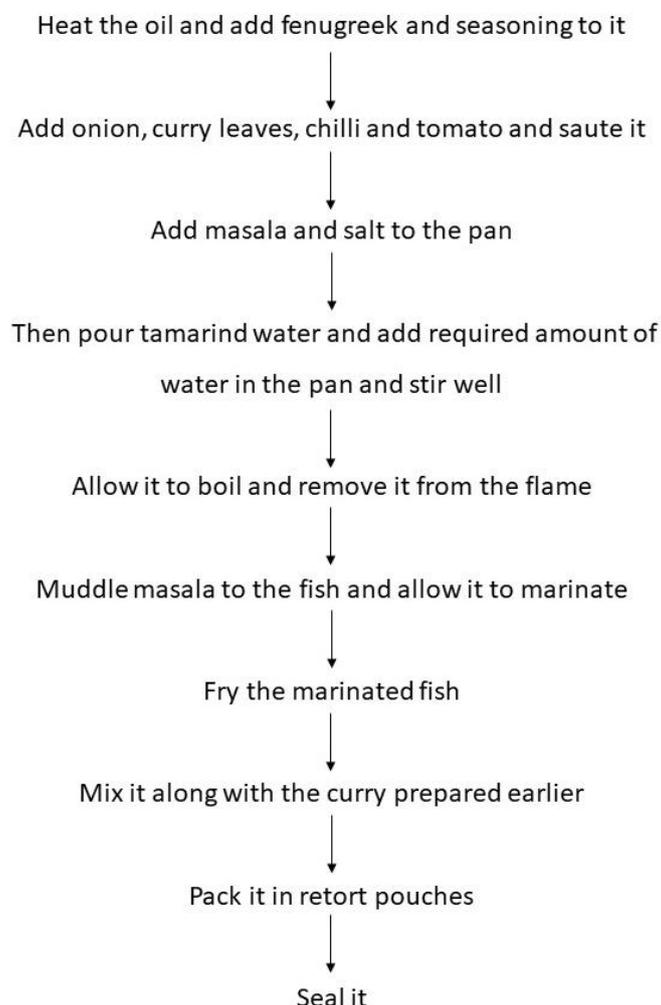


Flowchart 1: Fish pickle

Ready-To-Eat Fish Curry

The use of complex combination of herbs and spices in the Indian subcontinent is known as curry. This curry cannot be stored for a longer period. In order to improve shelf life and also to increase the convenience thermal treatment is done by retort processing; Ready-

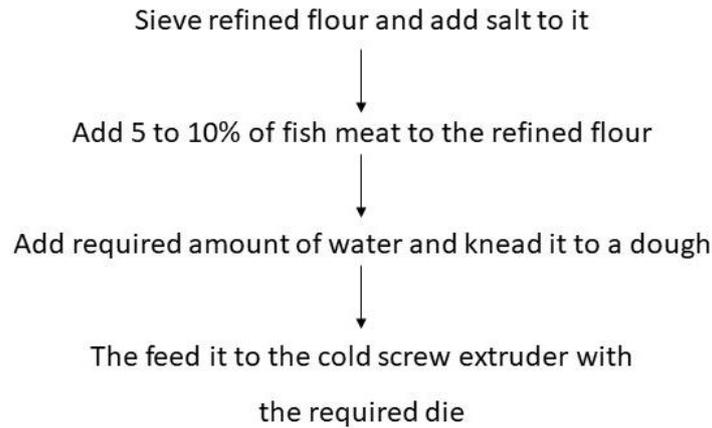
To-Product fish curry is manufactured. The ready to eat fish curry is usually manufactured traditionally but without the addition of coconut or coconut milk.



Flowchart 2: Ready-To-Eat fish curry

Fish incorporated noodles and pasta

Both pasta and noodles are cooked in hot water before being consumed. Nowadays it is also consumed with sauce or in soup, sometimes it is even fried. Noodles are long pasta, that are stretched and extruded or it is rolled flat which are then cut into any one of the numerous shapes that are available, like that of long waves, tubes, strings, thin strips and other shapes. Short pasta is found in various shapes with different names. These can be dried and stored or for short life span it can be refrigerated. To this fish is incorporated to increase the nutritional value of the product. Various compositions can be used in the manufacture of these products to make it healthier.



Flowchart 3: Fish incorporated noodles and pasta

RESULTS AND DISCUSSIONS

This study proved to be beneficial for the fisher women of all the three groups compared to that of their vending business. In this they were able to gain more than 40% of what they have invested in it, which covers the operation cost and the production cost, which was very difficult in the vending business. The manufactured products were sold in the brand name of Poombuhar Omega of Fish Processing Incubation Facility, College of Fisheries Engineering, Nagapattinam. In the fisher women who participated in this study, we also noticed that there was change in their confidence level, sense of achievement, enhanced awareness, improvement in leadership quality and in decision making and empowered economically.

The bar chart below (Fig.1) describes the monthly income that is earned by each women during their vending business in a month and also their earnings while being a micro-entrepreneur.

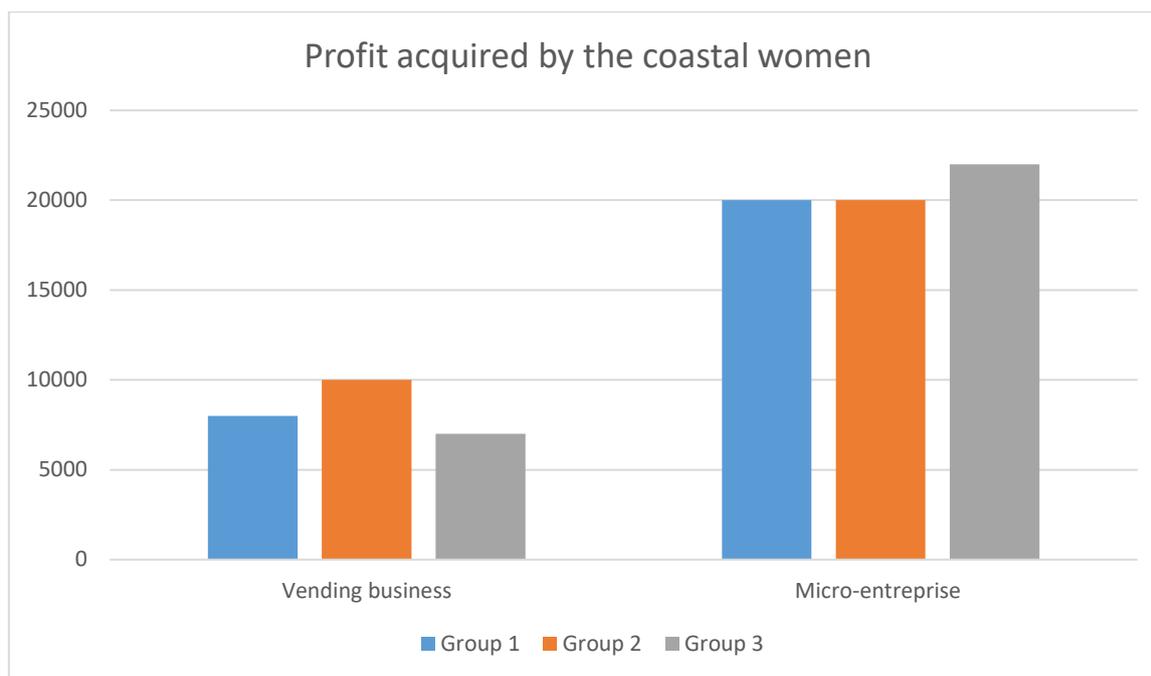


Figure 1: Profit acquired by coastal women in both vending and being a micro-entreprise

In the cost economics that is mentioned below (Table 1), for 10 kg of the end product the production, operation and the total cost is given. Moreover, the total margin gained is from the 10 kg production of the product. In case of fish curry, the groups made three batches of 10 kg which would triple the profit of the fish curry than regular vending process.

Table 1: Cost economics for production of value added fish product

PRODUCTS	PRODUCTION COST (Rs)	OPERATION COST (Rs)	TOTAL COST (Rs)	SELLING COST
Fish pickle	1790+300	326+121	2537	Rs. 50/100 gm Rs. 5000/10 Kg
Fish curry	1036+200	108+620	1964	Rs. 120/250 gm Rs. 4800/10 Kg
Fish incorporated noodles	670+400	210+90	1370	Rs. 30/100 gm Rs. 3000/10 Kg
Fish incorporated pasta	670+400	210+90	1370	Rs. 30/100 gm Rs. 3000/10 Kg

CONCLUSION

Women are known for the work they do both at home and at the area of field they work in as they possess great potential, knowledge, skill and resources which is the basic necessity for establishing and managing any enterprises. From this study, it is well observed

and can be stated that the coastal women can make their livelihood more stable by becoming micro-entrepreneurs than that of by vending fish. Through these, they were able to preserve the fish products for a longer period of time through the thermal method of retort processing, value addition by incorporating fish into pasta and noodles and also through pickling. This naturally increases the income and also the availability of these value added food products in the market which also benefits the health.

REFERENCES

- [1] India – National Fishery Sector Overview; 2006. Food and Agricultural Organisation of the United States.
- [2] Kiranjot Sidhu and Sukhjeet Kaur; 2006. Development of Entrepreneurship among Rural Women. *Journal of Social Science* 13(2); 147-149.
- [3] Kuratko Donald F and Richard M Hodgetts; 2001. *Entrepreneurship – A Contemporary Approach*. New York, U.S.A. Harecourt College Publishers.