



Production of Fish Value Added Items Helping on Livelihood Enhancement of Fisherwomen of Poompuhar, Sirkazhi Taluk, Nagapattinam District in Tamil Nadu, India

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Abstract

The fish for all Research and Training centre of poompuhar was established with the support from Jamsetji Tata trust and Tata educational trust and has been conceptualized in response to the felt need of the coastal communities along Tamil Nadu coast as a result of the interactions held after the Tsunami of 2004. The long time strategy of the Centre aims at bringing about a collective and holistic approach for the coastal community in the field of natural resources management, training and capacity building and also sustainable livelihood options. With this idea in mind a few self-help groups of fisherwomen were formed and given training on various aspects of hygienic preprocessing of fish and preparation of value added items. The activities of the self-help groups in preparing various value added items of fish such as shrimp idly powder, ready to cook fish, dry fish, masala dry fish, fish pickles, prawn pickle and how these activities have helped to enhance the livelihood of the women are described in this presentation.

Keywords: Community, Livelihood, fish, Dry fish, Value added, Preparation.

Introduction

The M.S. Swaminathan Research Foundation (MSSRF) has been working actively in Sirkzhi taluk of Nagapattinam district of Tamil nadu especially through the Fish for all research and training centre at Poompuhar which came into existence with the support from Jamshedji Tata Trust and Tata Education Trust in response to the felt need of the coastal communities after the devastating effects of the Tsunami. The long time strategy of the centre is to bring about a collective and holistic approach for the coastal community in the field of natural resources management, training and capacity building and also sustainable livelihood option. With this idea in mind 3 self help groups of fisherwomen were formed and given training on various aspects of hygienic preprocessing of fish and preparation of value added items at the Fish for all centre, Poompuhar.

One of the mandates of MSSRF, Fish for all centres is to train fishermen / women, artisan, nontraditional fishermen, fish vendors, fishing laborers and fisherwomen to add value to the chain from Capture/Culture –Consumption through multiple training models. Another mandate is developing social marketing techniques, which can help to ensure the availability of good quality aquatic products especially low value fishes to resource poor consumers. The activities of the 3 self help groups in preparing various fish value added items are described in this paper; more over how these activities have helped in the livelihood enhancement of the women are also described.

Material and Methods

Through personal meeting and house to house visits, baseline information was collected from 300 fisherwomen from 3 fishing villages. For need based training on fish value addition and related aspects, training on various aspects of hygienic fish handling and fish processing technologies such as preparation of prawn and fish pickles, salted dry fish, masala dry fish, Chennakkuni shrimp idly powder, etc. were given to vendors, fisherwomen, trainers and students. Scientists from CIFT and staff from MSSRF trained 157 fishers in dry fish production using the solar dryer. They were also trained in proper packing methods of fish in pouches, standing pouches, polyethylene packets, bottles etc.

From this trained group, interested women fisher folk approached us and MSSRF helped in forming 3 self help groups i. Kadal meen fisherwomen SHG (12 nos. all women) from Poompuhar, ii. Muthu cippi fisherwomen SHG (20nos.) from Vanagiri village and iii. Kadal matha fisherwomen SHG (15 nos.) in Poompuhar.

The first group was requested to concentrate on preparation of fish /prawn pickles apart from other fish folk value added items. The second group was encouraged in preparation of dry fish and the third group was asked to concentrate on Shell fish idly powder. A group of entrepreneurs formed a small company named Green Diamond International and tried to produce Fresh fish – ready to cook, packed in pouches. The women of Kadal

meen SHG helped in the preparation of the fresh fish. The facilities of the fish for all research and training centre mainly the Fish processing unit having inbuilt facilities such as a flake ice production unit having a capacity of 2 tons per day, modern stainless steel processing tables, vessels and needed items such as insulated ice boxes, plastic crates etc., a flowing water system for cleaning, an ETP (an effluent treatment plant), 2 chill rooms, toilets and wash basins for gents and ladies , a proper water drainage system and the solar dryer, were extended to them for free in preparation of the fish value added items. Our Plant manager helped and supervised the preparation of value added items.

Results and Discussion

The three self help groups prepared fish value added items as detailed below in table-1.

These groups sold the fish value added items in Poompuar, Chennai, Thiruvankadu, Velankanni, and Nagapattinam in supermarkets, open stalls and by door delivery. This also led to create interest among entrepreneurs to approach us for preparation of fish value added product preparations and in marketing them. The following photographers clearly show the activities and the production.

Table-1
The details of the production and sales proceeds (for the period April, 2013 to November, 2014)

Name of the SHG	Village	Shell fish powder in Kg.	Fish Pickle in Kg.	Prawn pickle in Kg.	Dry fish in Kg.	Masala dry fish in Kg.	Sales in Rs
Kadalmeen	Poompuhar	128.000	169	78	15	21	1,53,208
Muthucippi	Vanagiri	11.150			40	3	27,740
Kadalmatha	Poompuhar	32.300					9,600
Total		171.450	169	78	55	24	1,90,548

Table-2
The Green Diamond International Company Prepared Fresh Fish Pockets Sales Detail

Name of the fishes	No of fish Packets sales	Total fish in Kg.	Total Sales in Rs
Fish	53	34.800	
Crab	7	5.000	
Prawn	1	0.300	8,930
Fish	12	5.350	1460
Prawn	101	25.350	
Seer fish	47	23.500	20,110
arakolla	37	18.500	7,400
Fish	42	20.500	
Prawn	19	5.700	9,620
Fish	31	7.750	6,500
	350	146.750	54,020



Figure-1
Ready to cook fresh fish



Figure-2
Ready to cook fresh prawn



Figure-3
Shell fish idly powder production



Figure-6
Dry fish / masala dry fish production



Figure-4
Shell fish idly powder ready for sale



Figure-7
Fish value added items sales



Figure-5
Fish / Prawn pickles preparation and packing



Figure-8
Fish value added items sales at sea shore

The Shell fish powder has high nutrition value (table-3) and is well accepted by the consumers.

Table-3

Proximate analysis of Shell fishidly powder of (100gm)

Particulars (%)	Value (%)
Protein (%)	37.33
Carbohydrate (%)	31.09
Fat (%)	14.10
Fibre (%)	0.48
Peroxide*(m.eq./Kg	0.52

Entrepreneur Development: Work towards developing entrepreneurs who can produce and market fish value added items using facilities of FPU and using the services of trained women fishers continued. So far 6 groups have approached us. All have produced samples for market trials and our aim is to make use of the fish groups in production of value added items only and the marketing of the products will be done by entrepreneurs.

We have trained the fishers in packing the fresh fish in high density polythene trays and sealing the trays in ready to sell form. For dry fish preparation we have a solar dryer. The fish after proper cleaning and salting are dried inside the solar dryer. These are also sealed in high density polythene pouches. The dried fish have a good shelf life. Some of these products were also test marketed in nearby supermarkets.

Advantages and Disadvantages of Value Addition: Value added products meet changing consumer life-style requirements. Offers better utilization of different low value fishes as well as by-catches. Facilitates incorporation of other ingredients for culinary benefits, quality and economy. Promotes employment, entrepreneur ventures and exports and also minimizes imports. Provides greater convenience to consumer through decreasing preparation time and minimizing preparation steps. In general, returns out of value added products are always greater than fresh fish/ shell fishes. There are some disadvantages as well. Value addition increases the cost of product requires skilled technology, attractive packing and refrigerated storage etc. But the advantages are more.

Value added fish products are usually perceived to be those that have added ingredients such as a coating or sauce, are prepared, trimmed or in some way provide more convenience to the user” Value is a combination of quality, service, and price. The basic benefits of value addition as far as food is concerned include the functional and emotional benefits related to quality and nutrition, convenience in preparation and high sensory appeal at a reasonable cost.

The dual advantages namely, finding ways for better utilization of low-value fish species and providing protein-rich convenience foods, have been pointed out as the main outcome of value addition. Value addition has opened a new field for the

profitable utilization of by-catch and low value fish catches. In India even now majority prefer fresh fish. However there is an increasing trend in the utilization of value added fish products as evidenced by their availability in modern super markets as well as malls which are becoming popular. Empowerment of women and formation of self help groups also have lead to the increased small scale level production of value added items in recent times. This is the reason, why MSSRF is promoting value addition of fish/shellfish through self help groups. If the Government can provide storage facilities as well as scientific infrastructure for curing of fish, the bulk catches will be utilized by the fishermen for value addition to hygienic products such as fish mince, properly dried fish etc. Moreover, this would also prevent the wastage of by-catches from trawlers by fishermen (IGNOU, 2010). Kabahenda M.K et.al in their paper mention that loss in nutritional quality occurs in the preparation of value added items from fish. The losses occur at different stages of the fish value addition.

Conclusion

Through the development of self help groups comprised of women fishers, one of the mandate of the MSSRF “strengthening and diversifying the existing livelihood and identify alternative livelihoods” was achieved. More and more fisherwomen are approaching us to get trained in fish value addition.

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