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FUTURE PROSPECTS ON VALUE-ADDED FISH PRODUCTS IN KANYAKUMARI WITH SPECIAL REFERENCE TO AGASTHEESWARAM TALUK

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Abstract

Fish and fisheries products can be given more value based on the demands of the various markets. Value addition is one strategy that might be used to increase profitability in the fish processing industries because it is getting more and more expensive and highly competitive. There is a great demand for fish and fish-based products in ready-to-eat convenience form. According to the market surveys packaging, advertising and innovative product development are a few of the very important areas, which ultimately determine the successful movement of a new product. The study focused on customer satisfaction towards value-added fish products. The study is based on subjective and objective knowledge of the future prospects of value-added fish products, social and demographic characteristics. The findings of the study was based on data collected from 100 respondents who responded to a questionnaire. The result of the findings exposed that innovative product development with concern to consumer requirements and environmental friendly productsare the main aspect toenhances the future prospects of the value-added fish product potentially in Kanyakumari district with special reference to Agastheeswaram taluk.

Keywords: Future prospects, enhancing fishing industry, fish and fisheries-based products, value-added fish products, processed seafood products.

INTRODUCTION

India provides a strong foundation for the processed sector. Several development strategies have focused on the fishing industry in recent decades. Convenience plays an important role in the marketing of fish and fishery products. Clean, cut ready to cook or ready-to-eat forms of fish is demanding more and consumer are willing to pay extra premium for it. 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, nutrition, convenience in preparation and high sensory appeal at a reasonable cost.

Due to health concerns, fish and fish-based cuisine are becoming more and more popular all over the world. Research and development are crucial for the success of this sector. Value-added production is basically one of many possible approaches that a company or policymaker must take into consideration. To determine the best long-term plan, alternative uses of the relevant economic resources must be considered. Fishery commodities are important to the economy of our country, so, we must have the proper idea about value-added fishery products.

Globally, food production is continued to be lost and wasted. To meet the global food challenge, it is necessary to consider post-harvest losses[1]. Postharvest losses contribute to food shortages and ongoingfood insecurity. Value addition in the fishery industryproduces quality and adequate demand for the products. However, the growing market demand for quality and consistency in supply requires resources and necessary technical skills.

There is a poor linkage between Research and Development institutions and the fish-value addition industry. The scarcity of postharvest and value-addition technical specialists and inefficient knowledge transfer from research stations to extension services are a few constraints for needed outreach activities.The mainreasons for post-harvest losses are the inadequate or inappropriate application of proper post-harvest practices and improper production planning.Food security and poverty reduction have been fundamental tothe world development plan yet the principal subjects haveevolved with the growing population, changes in theworld economy, technological innovations, and environmental conditions.Value addition is one strategy that might be used to increase the profitability of the fish processing sector, which currently places more focus on quality control. Hence the paper focuses on the future prospects of value-added fish products in Kanyakumari district.

IMPORTANCE OF VALUE ADDITION

Value addition is described as an activity that producers may use to create a new commodity by altering its current location, time, and from one set of qualities to other traits that are more desirable in the marketplace in order to make a profit. Value addition is essential for enhancing the product's standard in the market by raising its quality and brand awareness, raising profits, and creating more jobs.

- Value addition makes the product availablethrow-out the year which makesit easy availability of the product.
- It lengthens and enhancesthe shelf life of the particular product.
- It encouragesemployment opportunity
- Value addition satisfy the customer requirement which meets their demands
- It strengthens the country's trade and economy.
- It helps people overcoming from poverty and hunger.
- Adding value is essential for reducing post-harvest losses.
- It helps to improve the product's quality, preference, texture, and flavour.
- It reduces post-harvest losses.

REVIEW OF LITERATURE

Leonora D *et al.* (2017) examined the process of smoking squid (Sepioteuthislessoniana) locally known as "Bakag". They introduced chilling and marinating of squid mantle before smoking to improve taste and texture. Their finding from the research indicated that a better way of smoking squid considering improved product acceptability in terms of texture, flavour, and colour was developed. The acceptable product was determined through sensory evaluation using a 5 point hedonic scale rating. They revealed that the developed squid product has 69.6 per cent moisture, 23.3 per cent protein, and microbial test are within acceptable limits which means the smoked squid is safe for human consumption.[2]

Naser Agh et.al (2014) explored the potential development of value-added fishery products in underutilized and commercial fish species. Eight underutilized species of fish that

[1]World Bank. DC2011-0002. Responding to global food price volatility and its impact on food security; 2011. Development Committee.

[2]Selvaganapathy .E &Krishnan .L ,Production of value added items helping on livelihood enhancement of fisher women of poompuhar, Sirkazhi Thaluk, Nagapattinam District in Tamil Nadu , India ,Research Journal of Animal, Veterinary and Fishery ,Sciences ISSN 2320-6535 , Vol. 3(6),1-4, June (2015), Res.J.Animal, Veterinary and Fishery Sci.

occur most frequently in the inland waters of West Azarbaijan (NorthWest of Iran) were selected, namely, Asp (Aspius aspius), Goldfish (Carassius auratus), Lenkoran (Capoeta capoeta), Barbel (Barbos capito), Roach (Rutilus rutilus), Goatfish (Barbus barbulus), Wels (Silurus glanis) and Crucian carp (Carassius carassius). On the other hand, five freshwater fish species of commercial importance were chosen. They denoted that all underutilized and commercial fish species have high macro nutrient (lipid and protein) values, even though there are a few contrasts among them. They inferred that characterization of the fish species showed that lipids of more underutilized fish species as well as commercial species showed high levels of essential fatty acids. Hence, consumption of these species is highly recommended as a wholesome food for humans since these fishes are more nutritious. They proposed that from the nutritional and economical perspective, the most promising approaches to accomplish the full utilization of these underutilized fish species should receive a great deal of attention.[3]

Cliffe P.T. & Okereke A.N. (2010) focused on recipes for the production of snacks using finfish and shellfish such as cockles, oysters, and pelagic fish in the production of fish yam or sweet potato balls, fish roll or fish pie, cockle and oyster barbecue. A taste panel of three women and two adolescents aged 13-45 years was chosen to taste the snacks from local mongers in the city of Port Harcourt. They assumed that the respondent's highest preference was given to fish sweet potato balls, rated 9, followed by oyster and cockle barbecue rated 8.6 on a 9-point scale. Therefore, their study revealed that the prices of the production of snacks were cheap and easily affordable. They concluded that these snacks are easy to make and could be widely accepted. They also recommended that making of these snacks was to introduce a wide range of foods produced using fish to add value to our daily nutrition.[4]

STATEMENT OF THE PROBLEM

In comparison to any other type of animal product, fish consumption has increased more significantly. According to earlier studies, the understanding of fish's nutritional worth is predicted to increase demand for fish during the next ten years. Increased food demand results from an expanding population. Therefore, value addition is essential for providing food for everyone. Product availability throughout the year, increased profits, improved processing efficiency, keeping up with consumer demand, and offering a wide range of products are the main goals of value addition. Thirty-five percent of the world's crop is lost or squandered in the fisheries and aquaculture industries.

Inappropriate handling and a lack of infrastructure at various locations, from the landing center to the customercause post-harvest losses. In addition, customers do not choose cheap fish as food due to a number of problems, including their small or unusual size, ugly appearance, extremely bony body, unpleasant flavour, etc.However, these fish can be directly utilized for human food by value addition with the application of modern technology. Therefore, it is vital to analyze the need for modifications that have a possible impact on the future prospects of value-added fish products.

OBJECTIVES OF THE STUDY

The objectives of the paper are,

1. To study the demographic profile of the sample respondents.
2. To determine what needs to be done to enhance chances for value addition to fisheries products in the future.

METHODOLOGY OF THE STUDY

[3]Amir rezashaviklo "market for value added fishery products in iran: opportunities, challenges and future perspectives " , marketing8infofish international 6/2016 ● www.infofish.org

[4]Promotion of Exports of Value-Added Fishery Products from INFOFISH Member Countries, Asia and the Pacific Region: Fiji, India, Malaysia, Maldives, Samoa, Solomon Islands and Thailand Rome (Italy). Fisheries Dept. FAO

The purpose of the research was to examine the future prospectsof value-added fish products in the future.Present study is empirical in nature and based on both primary and secondary data. Primary data were collected with the help of well-structured questionnaire. The researcher preferred Agastheeswaram taluk on the basis of the simple random sampling. The size of the sample is 100 respondents. Each and every respondent are interviewed with the help of questionnaire. Secondary data were collected from various books, journals and website.

LIMITATIONS OF THE STUDY

The following are the limitations of the present study.

1. The study is restricted only to Agastheeswaram taluk.
2. The number of respondents are limited to 100 so the result can't be generalized.
3. The study is completely based on the information provided by the sample respondents.
4. One of the major limitations of this study is the lack of sufficient and reliable secondary data. In the absence of the research.

Result and Discussion

The demographic profile of the respondents were categorized into several variables as gender, age, marital status, educational qualification, occupation, monthly income and residential status. The table1 shows the demographic profile of the respondents.

Table No.1: Demographic Profile

Variables	Particulars	No. of Frequency	Percentage
Gender	Male	45	44.2
	Female	55	54.8
	Total	**100**	**100**
Age	Less than 20 years	14	14
	21 -30years	49	48.5
	31-40years	25	24.5
	Above 40 years	12	12
	Total	**100**	**100**
Marital status	Married	58	57.4
	Unmarried	40	39.6
	Total	**100**	**100**
Educational Qualification	UG	56	55.4
	PG	14	13.6
	Others	42	42
	Total	**100**	**100**
Occupation	Private employee	35	34.7
	Self-employed	30	29.7
	Government employee	15	14.9
	Professional	5	5
	Other	15	14.8
	Total	**100**	**100**
Monthly Income	Less than □ 20,000	60	59.4
	□ 20,001-□ 30,000	20	19.8
	□ 30,001-□ 40,000	10	9.9
	Above □ 40,001	10	9.9
	Total	**100**	**100**
Area of residence	Urban	28	28
	Rural	72	72

	Total	**100**	**100**

Source: Primary Data

Table 1 shows that 45 per cent of the respondents are male and 55 per cent of the respondents are female. 48.5 per cent of the respondents belong to the age group of 21-30 years and 12 per cent of the respondents are above 40 years. 57.4 per cent of the respondents are married and 39.4 per cent of the respondents are unmarried. 55.4 per cent of the respondents are undergraduates and 13.6 per cent of the respondents are postgraduates. 34.7 per cent of the respondents are private employees. 59.4 per cent of the respondents are earning an income less than 20,000. 72 per cent of the respondents belong to rural area and 28 per cent of the respondents belong in urban area.

Key drivers that enhance the future potential factors of value addition in fisheries products

To find out the key aspects for the future potential of value addition in fisheries products, factor analysis is applied, to extract two factors from the 10 indicators which enhance the potential value of fish through value addition.

The appropriation of this analysis is tested by Keiser- Meyer-Olkin (KMO) and Bartlett's test of Sphericity is used and the results are shown below.

Table. No.2

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.771
Bartlett's Test of SphericityApprox. Chi-Square	775.072
Degrees ofFreedom	45
Significance	.000

Table 2 shows that the highworth of Keiser-Meyer-Olkin Measure (KMO) test of sampling adequacy (0.771) shows the relationship between the sets of variables described by different factors and accordingly factor investigation is viewed as fitting in this model. Bartlett's Test of Sphericity Approx. Chi-Square indicates the population correlation matrix. It is an identity matrix. The test of statistics for Sphericity is based on the χ^2 test which is significant and the value 775.072 at 45 degrees of freedom which is significant at a one per cent level. Therefore, consequently, this method of factor investigation might be viewed as a proper one.

Key aspects of enhancingthe future potential factors of value addition in fisheries products

The rotated component matrix for ten variables relating to the future potential factors of value addition in fisheries products is given in Table 3.

Table No. 3
Key aspects of enhancing future prospects on value addition in fisheries products

S. No.	enhancing the future prospects on value addition in fisheries products	Component	
		Product innovation	Environmental friendly
1	Improve quality of the products	0.940	

2	Improve uniqueness of the products	0.932	
3	Need to increase the variety of the products	0.900	
4	Improve taste	0.816	
5	Improve texture	0.801	
6	New preparing methods and packaging	0.746	
7	Provide eco-labeling		0.880
8	Need to improve awareness of products		0.870
9	Increase advertisement		0.828
10	Need to improve food safety		0.731

The statement characterizing the factors with their factor loading and communality for enhancing factors of future potential in value addition in fisheries products by using eigenvalue are given in table 4.

Table 4
Enhancing factors of future potential in value addition in fisheries products

S. No.	Factors	Eigen Value	Percentage of Variance	Cum-Percentage of Variance
1	**Product innovation**	4.924	49.239	49.239
2	**Environmental friendly**	2.158	21.575	70.814

The given ten variables in enhancing factors of future potential in value addition in fisheries products are reduced into two factors by applying factor analysis. These two factors amount tocumulative percentage 70.814. The two factors extracted are the key drivers of enhancing the potential value of the fish through value addition namely product ‘Innovation’ and‘Environmental friendly’.

The first factor named asproduct ‘Innovation’ are the combination of six factors namely ‘improve quality of the products’ 0.940, ‘improve uniqueness of the products’ 0.932, ‘need to increase the variety of the products’ 0.900, ‘improve taste 0.816, improve texture’ 0.801, ‘new preparing methods’ and ‘packaging’ 0.746.

The second factor which is named as ‘Environmental friendly’includes the ‘provide eco-labeling’ 0.880,‘need to improve awareness of products’ 0.870, ‘increase advertisement’ 0.828 and ‘need to improve food safety’ 0.73. It inferred that these are the important factor in the success of a value-added fish product.

IMPLICATION

- When comes to packaging convenience features such as ease of access, handling, easy disposal and product visibility greatly influence package innovation. As a result, manufacturers shall facilitate innovative attractive at the same time eco-friendly packages.
- The taste and flavour of a product are important factors in consumer preference, thus manufacturers should pay attention to these factors.
- Improving product quality is essential since it influences a company's performance and creates its brand in target markets.
- Increasingawareness of eco-label among consumersis enhance consumer buying behaviour
- Advertising can provide basic information of the product so increasing advertisement increases sales by telling potential customers.

CONCLUSION

During recent decades, a number of development plans have focused on the fisheries sector. There are several factors responsible for value addition. Convenience plays a major role in fish and fishery product marketing. Clean, cut ready to cook or ready-to-eat forms of fish is demanding more and consumers are willing to pay extra premiumsfor it.Price, quality, convenience, availability in all seasons, variety, nutritional concern, safety and hygiene are principal determinates of the future prospects of fish and fisheries products. The basic benefits of value addition as far as food is concerned include the functional and emotional benefits related to quality, nutrition, convenience in preparation and high sensory appeal at a reasonable cost.

Value addition has twin advantages namely, finding ways for better utilization of low-value fish species and providing protein-rich convenience foods, which have been pointed out as the main outcome of value addition. So, manufacturers and exporters aim to satisfy the rising consumer demand for products with added value.At the same time, Indiangovernment wants that value addition takes place in its own country rather than in the importing country as it is to benefit job creation and higher economic activity. Moreover, in order to make the industry globally competitive, parallel developments should be reflected in Government policies and investors friendly incentives.

REFERENCE

[1] Gonçalves and C. Kaiser, Value-added products from aquaculture: A global trend, world aquaculture 43:4 pp 48-52,67, December 2011. ©2011 World Aquaculture Society, Baton Rouge, LA USA.

[2] Promotion of Exports of Value-Added Fishery Products from INFOFISH Member Countries, Asia and the Pacific Region: Fiji, India, Malaysia, Maldives, Samoa, Solomon Islands and Thailand Rome (Italy). Fisheries Dept. FAO

[3] World Bank. DC2011- 0002. Responding to global food price volatility and its impact on food security; 2011. Development Committee.

[4] Selvaganapathy .E & Krishnan .L ,Production of value added items helping on livelihood enhancement of fisher women of poompuhar, Sirkazhi Thaluk, Nagapattinam District in Tamil Nadu , India ,Research Journal of Animal, Veterinary and Fishery ,Sciences ISSN 2320-6535 , Vol. 3(6),1-4, June (2015), Res.J.Animal, Veterinary and Fishery Sci.

[5] Amir rezashaviklo "market for value added fishery products in iran: opportunities, challenges and future perspectives " , marketing 8infofish international 6/2016 ● www.infofish.org

[6] S Salim Shyam, R Geetha, NR Athira, Economic recession and Indian seafood exports: reflections and paradigms, Indian Journal of Economics and Development, December 2019, Vol 7 (12), ISSN (online): 2320-9836 ISSN (Print): 2320-9828.

[7] Smitha R. Nair, S.K. Pandey" Arpita Sharma & Shyam S. Sallm, An Evaluation of the Business Peliormance of Fishery Cooperative Societies .in Vasai Taluka of Thane District) Maharashtra, indian cooperative review, january 2007, 225- 233.

[8] Salim Shyam S, Ramees Rahman M, KN Pushkaran, M Nashad, S Soma, Fish Marketing - A Market Structure Analysis of Kozhikode and Alappuzha districts, Marine Fisheries Information Service; Technical and Extension Series, 223-24, 18-23, Mar. Fish. Infor. Serv., T & E Ser., No. 223 & 224, 2015.

[9] Kurien, John & López Ríos, Javier 2013. Flavouring fish into food security. Report/Rapport: SF-FAO/2013/14. August/Aout 2013. FAO-SmartFishProgramme of the Indian Ocean Commission, Ebene, Mauritius

[10] Shyam S. Salim and S. Monolisha, Fish Consumption: Gauging the determinants of consumption and buying patterns across Kerala markets, Journal of the Marine Biological Association of India Vol. 62, No.1, January-June 2020, doi:10.6024/jmbai.2020.62.1.2114-03

[11] Purchase Behavior of Consumers for Seafood ProductsArticle · October 2011 DOI: 10.24200/jams.vol8iss1pp1-10

Websites

https://www.hsph.harvard.edu/news/hsph-in-the-news/is-it-okay-to-eat-fish-every-day/
https://seafood.edf.org/benefits-eating-fish
https://www.healthline.com/nutrition/11-health-benefits-of-fish
https://oehha.ca.gov/fish/benefits-risks
https://sciworthy.com/when-it-comes-to-buying-seafood-there-are-five-kinds-of-people-which-one-are-you/
https://onlinelibrary.wiley.com/doi/full/10.1111/raq.12737
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5076726/
https://egyankosh.ac.in/bitstream/123456789/9798/1/Unit-12.pdf