A STUDY OF CONSUMER PREFERENCE WITH SPECIAL REFERENCE TO CARP FISH VARIETIES IN COIMBATORE CITY

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Abstract

Overall, there has been an increasing trend in demand for fresh water fishes. In India, fish cultivation was originally confined to eastern region of India like West Bengal, Assam, Bihar, Jharkhand and Orissa. In due course, cultivation of fish in existing water bodies started in States like MP, UP, Rajasthan & Tamil Nadu. Inland fisheries in India provide livelihood options to a large numbers of poor families in India. As inland fishery became profitable, local elites started controlling these water bodies. In inland fish market, consumers prefer fresh fish i.e. mainly carps. In case, fresh fish is not available, they go for fish preserved in ice. The demand for fish is increasing day by day. The overall objective of the study was to develop a Marketing Strategy for and consumer preference to carp species.

Keywords

Carp Fish Varieties, Consumer Preference, Inland Fishes, Demand and Respondents.

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Introduction

Fishing in India is a major industry in its coastal states, employing over 14 million people. Fish production in India has increased more than tenfold since its independence in 1947. According to the Food and Agriculture Organization (FAO) of the United Nations, fish output in India doubled between 1990 and 2010. India's fresh water resources consist of 195,210 kilometers of rivers and canals, 2.9 million hectares of minor and major reservoirs, 2.4 million hectares of ponds and lakes, and about 0.8 million hectares of flood plain wetlands and water bodies. In addition, India's water and natural resources offer a tenfold growth potential in aquaculture (farm fishing) from 2010 harvest levels of 3.9 million metric tonnes of fish, if India were to adopt fishing knowledge, regulatory reforms, and sustainability policies adopted by China over the last two decades.

History of Indian fisheries

Fishing and aquaculture in India has a long history. *Kautilya's Arthashastra* (321–300 B.C.) and *King Someswara's Manasottara* (1127 A.D.) each refer to fish culture. For centuries, India has had a traditional practice of fish culture in small ponds in Eastern India. Significant advances in productivity were made in the state of West Bengal in the early nineteenth century with the controlled breeding of carp in Bundhs (tanks or impoundments where river conditions are simulated). Fish culture received notable attention in Tamil Nadu. In addition to this marine zone, India has about 14,000 km² of brackish water available for aquaculture, of which only 600 km² were being farmed in the early 1990s; about 16,000 km² of freshwater lakes, ponds, and swamps; and nearly 64,000 kilometers of rivers and streams.

Currently, most of the poor fishermen families do not have access or control over these critical resources i.e. water bodies. It has severely affected the livelihood of these poor families. With progress in access and control over the key resource i.e. water body, the need for enhancing income through systematic interventions related to production and marketing has been felt.

Freshwater Fish Market in India

The annual per capita availability of fish in the World is 12.1 kg. In context of India, it is 3.2 kg. The annual per capita consumption of fish is increasing every year. This is mainly due to

increase in purchasing power of consumers and their preference of fish being a low cost animal protein. Overall, there is a steady domestic demand for fresh water fish i.e. mainly Carps and Hilsa. Consumers generally prefer fresh fish. There is very limited processing of fresh water fishes in India. Inland fish market is quite informal in the country. Marketing channels are generally short. Producers' share in retail price is estimated to be more than fifty percent. The following diagram details the overall surplus and deficit scenario of fish across India.

Objectives of the study

Specific objectives were:

❖   To assess characteristics of consumer preference in terms of carp fish variety, quality, pricing, purchase behaviour.

❖   To assess the market potential for fish from the Tamilnadu region with specific markets identified including processed fish products and the requirements of buyers

❖   To explore market margins involved and the possibilities of capturing value in different stages of the chain like wholesaling, processing and retailing.

This is mainly because of increase in purchasing power, increase in non-vegetarian eating population and preference for fish as low cost protein (compared to meat).

Literature Review

Inland water bodies in India comprises of 2.35 million hectares of ponds & tanks, 3.15 million hectares of reservoirs, 0.2 million hectares of floodplain wetlands and 29, 000 km of rivers. The production from fish from inland water bodies in India is estimated to be 3.6 million metric tons. Currently, the production of fish is growing at a rate of 6 percent per annum. Carps contribute 87 % of inland fish production in India. The current level of productivity of fish from inland water bodies is very low. In context of India, primary responsibility of fisheries rests with State Governments.

In context of inland fisheries, most of the State Governments including Government of Tamilnadu focuses on optimizing production and productivity and improving welfare of fishermen. Demand is primarily for Indian Major Carps (*Catla, Rohu and Mrigal), Hilsa and Chinese Carps*. Most of the fishes are sold fresh.

Area of the study

The study focused on understanding the consumer preferences and demand for carp fish varieties.

Study area

Coimbatore, the second largest city in the Indian state of Tamil Nadu is surrounded by the Western Ghats on all sides at 11˚00'58"N76˚58'16"E11.0161˚N 76.971˚E. This lovely industrial city is situated on the banks of the Noyyal River which originates from the Vellingiri Hills and flows towards the East and joins the river Cauvery. The city sits amidst Noyyal's basin area and has an extensive tank system fed by Southwest monsoon but the Northeast monsoon rainwater.

This study covers the Coimbatore city only. Coimbatore is the southern cotton city of India. Literacy rate of Coimbatore were comparatively high. Coimbatore city was surrounded by various private colleges offer the various arts, sciences, engineering and courses to satisfy the educational need of the students.   Students also come from various places for educational purpose. In nowadays Coimbatore climate was changed due to highly polluted environment, dyeing factories, climate change, real estate, and low rain.

Different species of carp fishes considered for the consumer study

Catla (*Catla catla*), Rohu (*Labeo rohita*), Mrigal (*Cirrhinus mrigala*), Silver carp (*Hypophthalmichthys molitrix*), Grass carp (*Ctenopharyngodon idella*), Common carp (*Cyprinus carpio*).

Results and Discussion

Table.1 showing common and scientific names of different species of carp fishes

Sl.No.	Common name of fish	Scientific name of fish
1	Catla	*Catla catla*
2	Rohu	*Labeo rohita*
3	Mrigal	*Crihinus mrigala*
4	Silver Carp	*Hypophthalmichthys molitrix*
5	Grass Carp	*Ctenopharyngodon idella*
6	Common Carp	*Cyprinus carpio*

Table.2 showing the details of % of respondents in each category

Factors		Frequency	Percent
Gender	Male	180	61.4
	Female	113	38.6
Age	Up to 18 years	150	51.2
	18 to 23 years	106	36.2
	Above 23 years	37	12.6
Course studying	UG	190	64.85
	PG	103	35.15
Family income	Below 10,000	172	58.7
	10,001 to 20,000	80	27.3
	20,001 to 30,000	22	7.5
	30,001 to 40,000	13	4.4
	Above 40,000	6	2.0
Residence	Urban	125	42.7
	Rural	168	57.3

Table 2 & 3clearly reveals that 180 respondents are male, 113 respondents are female, under the age category majority of the respondents are comes under the age group of 17 to 20 years, 106 respondents are under the age category of 21 to 23 years, minimum 37 respondents only comes under the age category of above 23 years, on the basis of course of study 190 respondents are studying in the UG Level, 103 respondents are studying in PG Level , on the basis of parents monthly income of the respondents 172 respondents parents monthly income are below 10000, and 80 respondents parents monthly income are 10001 to 20000 and 22 respondents parents monthly income are 20001 to 30000 and 13 respondents parents monthly income are 30001 to 40000 and only 6 respondents parents monthly income are above 40000. On the basis of place of residence 168 respondents are living in rural area, other 125 respondents are living in urban area.

Table.3 Depicting the factors influencing the consumer purchase behaviour on Fish varieties

FACTORS	IMPACT	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIFICANCE
Gender	Between groups	2465.601	1	2465.601	13.065	0.000
	Within Groups	54791.866	291	188.28		
	Total	57257.468	292			
Age	Between groups	368.622	2	184.313	0.940	0.392
	Within Groups	56888.841	290	196.168		
	Total	57257.468	292			
Course studying	Between groups	788.046	1	788.046	4.061	0.045
	Within Groups	56469.422	291	194.053		
	Total	57257.468	292			
Family income	Between groups	3902.067	4	975.517	5.266	0.000
	Within Groups	53355.400	288	185.262		
	Total	57257.468	292			
Residence	Between groups	468.943	1	468.943	2.403	0.122
	Within Groups	56788.524	291	195.150		
	Total	57257.468	292			

Inference

➢ **Gender and buying behavior of the respondents**

Null hypothesis: There is no significant variation between the gender and factor to be considered while purchasing the fishes. Significance is greater than 0.05 accept Hypothesis at 95% of significance level, significant value is .000 it means significant value is less than 0.05 so, hypothesis rejected. It means factors to be considered by the respondents while purchasing the fishes is varied between genders of the respondents.

➢ **Age and buying behavior of the respondents**

Null hypothesis: There is no significant variation between age and factor to be considered by the respondents while purchasing the fishes. Significance is greater than 0.05 accept Hypothesis at 95% of significance level, significant value is .392 it means significant value is higher than 0.05 so, hypothesis accepted, it means factors to be considered by the respondents while purchasing the products are not vary with the Age of the respondents.

➢ **Course of study and buying behavior of the respondents**

Null hypothesis: There is no significant variation between Course of study and factor to be considered respondents while purchasing the fishes. Significance is greater than 0.05 accept Hypothesis at 95% of significance level, significant value is .045 it means significant value is less than 0.05 So, hypothesis rejected, it means factor to be considered by the respondents while purchasing the product is varied according to the course that are to be studied by the respondents.

➢ **Parents' monthly income and buying behavior of the respondents**

Null hypothesis: There is no significant variation between parents' monthly income of the respondents and factor to be considered while purchasing the fishes. Significance is greater than 0.05 accept Hypothesis at 95% of significance level, significant value is .000 it means significant value is less than 0.05 So, hypothesis rejected, it means factors to be considered by the respondents are varied with the parents' monthly income of the respondents

➢ **Place of residence and buying behavior of the respondents**

Null hypothesis: There is no significant variation between place of residence of the respondents and factor to be considered while purchasing the products. Significance is greater than 0.05 accept Hypothesis at 95% of significance level, significant value is 0.122 it means significant value is greater than 0.05 So, hypothesis accepted, it means factors to be considered by the

respondents while purchasing the fishes are not varied with the place of residence of the respondents.

Profile factors influencing the purchase offishes

Every customer is considered various factors while purchasing the fishes. This table explain the how the factors considered by the respondents are varied with the profile of the respondents.

Conclusion

The proposed marketing strategy is based on findings of the value chain assessment and relate to marketing of fish. Promoting groups for catching/harvesting of fish

➢	Sale of live fishes in major cities.

➢	Sale of brooder fishes to hatcheries.

➢	 Sale of small fishes as fish seed for stocking in large reservoirs.

➢	Tie up with ice factories for bulk purchase of ice so as to reduce cost.

➢	 Develop insurance product for fish stock, in association with insurance companies.

➢	 Developing market yards with infrastructure facility like water, storage facility and ice crushing units at weekly markets and whole sale markets and

➢	Develop harvesting & Post-Harvest Infrastructure at water body sites like platform for grading, weighing facility, ice storage facility, etc.

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