STUDY ON MARKETING OF FISH GRASS CARP (CTENOPHARYNGODON IDELLA) IN BISHNUPUR DISTRICT OF MANIPUR

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https://doie.org/10.0726/AE.2024252892

ABSTRACT

This study investigates the socioeconomic traits of fish farmers, the most popular marketing avenues, and how effective these avenues are at dispersing grass carp within a given area. Data from 190 respondents, representing a range of socioeconomic backgrounds, including age, gender, education, social category, family type, and religion, were gathered through the use of a structured survey. The results of the analysis showed a varied socioeconomic profile, with a sizable percentage of the producers fitting into the small-scale group, suggesting that smallholder operations predominate in the region. The research goes deeper into the grass carp marketing channels and finds two main ones: a direct producer to consumer model and a producer to local collectors, wholesalers, retailers, and consumers. A thorough analysis of these channels revealed that producers preferred the first one, citing its wider appeal and potential for more profit despite its complexity and more expensive marketing. The price spread, efficiency, margin, and cost of marketing for each of these channels were evaluated analytically. The results highlight how much marketing expenses affect producers' net returns and how important intermediaries are in determining the dynamics of the grass carp distribution market. The study also found a number of barriers to effective marketing, such as price fluctuations, environmental effects, and quality control. These findings highlight the necessity of targeted interventions to improve market access and profitability for fish farmers.

INTRODUCTION

The marketing of fish, particularly species like the Grass Carp (Ctenopharyngodon idella), plays a crucial role in the aquaculture industry, contributing significantly to the economy and food security of various regions. This is especially true for places like Bishnupur District in Manipur, India, where aquaculture is not just an economic activity but a way of life for many. The Grass Carp, known for its rapid growth and herbivorous diet, has become a favored species among fish farmers due to its ability to thrive in different water conditions and its high

market demand. This research project aims to delve deep into the marketing dynamics of Grass Carp in Bishnupur District, examining the entire supply chain from production to consumption, and shedding light on the challenges and opportunities that lie within.

Bishnupur District, with its abundant water resources, including lakes, rivers, and ponds, presents an ideal environment for aquaculture. The district's climatic conditions, characterized by a humid subtropical climate with a well-distributed rainfall pattern, further enhance its suitability for fish farming. According to the Department of Fisheries, Government of Manipur, the total fish production in Manipur has been steadily increasing over the years, with a significant portion attributed to carp species, including Grass Carp. However, despite the favorable conditions and the growing production, the marketing aspect of Grass Carp in Bishnupur District faces several challenges ranging from inadequate infrastructure to fluctuating market prices and the absence of a structured marketing strategy.

The demand for Grass Carp in the local markets of Bishnupur and surrounding areas is driven by its nutritional value, affordability, and versatility in local cuisines. Grass Carp is rich in protein, vitamins, and minerals, making it a popular choice among consumers. Market analysis indicates that the fish enjoys a steady demand throughout the year, with spikes during festive seasons and special occasions. However, the market supply chain of Grass Carp is fraught with inefficiencies, including multiple intermediaries, lack of cold storage facilities, and inadequate transportation infrastructure, leading to significant post-harvest losses estimated at 20-30% of the total production.The economic significance of Grass Carp in the local economy cannot be overstated. The fish farming industry in Bishnupur District employs a substantial portion of the rural population, directly or indirectly. It is estimated that around 60% of the rural households in the district are engaged in some form of aquaculture activity, with a significant number focusing on Grass Carp due to its profitability and market demand. The average income from Grass Carp farming can be significantly higher than other agricultural practices, making it an attractive option for rural households. However, the profitability is closely tied to market prices, which are subject to fluctuations based on demand and supply dynamics, competition from other fish species, and seasonal variations.

RESEARCH METHODOLOGY

The research was conducted in Bishnupur district of Manipur, a significant district in terms of area and production of fish Grass Carp (*Ctenopharyngodon idella*). From the district, one block was selected on a purposive basis for its high concentration of Grass Carp cultivation. A sample comprising 10 per cent of respondents was randomly selected from this block. A comprehensive list of all Grass Carp cultivators was prepared for all selected villages. Subsequently, the farmers were categorized into Small (< 1 Quintal), medium (1-2 Quintal), and large (> 2 Quintals) size groups based on the size of their aquaculture operations. Primary data for the aquacultural year 2023-24 was collected from the selected fish farmers. Secondary data were gathered from various published sources, including government offices, books, block development offices, reports, related websites, and other relevant sources. Consumer behaviour and product preference were determined through

personal interviews with Grass Carp cultivators. To meet the research objectives, analytical tools such as tables, charts, and graphs, along with simple ranking and percentage methods, were employed.

ANALYTICAL TOOLS

Cost of Marketing

$C = Cf + Cm1 + Cm2 + Cm3 + \ldots + Cmn$

Marketing Margin

$AMI = Pri - (Ppi + Cmi)$

Marketing Efficiency

$MME = FP / MC + MM$

Price Spread

$PS = MC + MM$

Garett's Ranking Techniques

Percent position $= 100 (Rij - 0.5) / Nj$

RESULTS AND DISCUSSIONS

Channel I: Producer > Local Collectors > Wholesalers > Retailer > Consumers

Table 1 (Marketing cost, price spread, marketing margin and market efficiency of Channel I)

S.No.	Particulars	Value in INR/Kg
1.	**Producer sale Price to Local Collectors**	**325**
	Cost Incurred by Local Collectors	
i.	Packaging Cost	**0.2**
ii.	Labour Cost	**0.1**
iii.	Transportation Cost	**0.1**
iv.	Storage Cost	**0.2**
v.	Miscellaneous Charges	**0.3**
	Total Marketing Cost (i-vi)	**0.8**
vii.	Margin of Local Collector	**7.0**
2.	**Sale Price from Local Collector to Wholesaler**	**332.8**
viii.	Margin of Wholesaler	**6.0**
3.	**Sale Price from Wholesaler to Retailer**	**338.8**
ix.	Margin of Retailer	**10**
3.	**Final Price to Customer**	**348.8**
A.	**Total Marketing Cost**	**0.8**
B.	**Total Market Margin**	**23**
C.	**Marketing Efficiency**	**436**
D.	**Price Spread**	**6.82%s**

This table outlines the economics of a product's journey from the producer to the final consumer, detailing the costs incurred, margins applied at various stages, and the final price adjustments in Indian Rupees (INR) per kilogram. It provides a comprehensive look at how the sale price of a product changes as it moves through different hands in the supply chain.

Channel II: Producer > Consumers

Table 2 (Marketing cost, price spread, marketing margin and market efficiency of Channel II)

S.No.	Particulars	Value in INR/Kg
1.	**Producer's sale Price (to other channels)**	**325**
	Cost Incurred by Producer	
i.	Packaging Cost	**2.0**
ii.	Labour Cost	**0.2**
iv.	Storage Cost	**1.0**
vi.	Miscellaneous Charges	**1.0**
	Total Marketing Cost (i-vi)	**4.2**
vii.	Margin of Producer	**15**
3.	**Final Price to Customer**	**344.2**
A.	**Total Marketing Cost**	**4.2**
B.	**Total Market Margin**	**15**
C.	**Marketing Efficiency**	**81.95**
D.	**Price Spread**	**5.57%**

Channel II in milk marketing, which encompasses producers, private dairy companies, retailers, and consumers, exhibits a unique pricing structure. Producers initially sell milk to private dairy companies at INR 30 per liter. These companies then incur a range of costs including packaging, labor, transportation, storage, processing, and miscellaneous expenses, totaling INR 20 per liter. They also add a margin of INR 12, resulting in a sale price of INR 62 per liter to retailers. Retailers further add a margin of INR 3, setting the final consumer price at INR 65 per liter. The overall financial structure in Channel II includes a total marketing cost of INR 20 per liter and a combined market margin of INR 15. The marketing efficiency is calculated at 1.85%, with a price spread of 1%, reflecting the efficiency of this channel and the markup from the producer to the consumer price. This channel demonstrates the higher costs and margins associated with private dairy company operations, leading to a higher final price for consumers compared to other channels.

Table 3: To identify the constraints faced in the marketing of fish and suggest suitable remedial measures.

S. No.	Constraints	Garret Score	Ranking
1.	Quality Control	30.7	I
2.	Environmental Impact	27.4	II
3.	Price Fluctuations	25.3	III
4.	Other	23	IV
5.	Limited Value Addition	21.9	V
6.	Perishability	19.2	VI
7.	Access to Markets	17.1	VII
8.	Regulatory Barriers	15	VIII
9.	Fluctuating Supply	13.1	IX

This table ranks various constraints affecting a certain context, each scored with a Garret Score and given a ranking from I to IX. Quality Control is the most significant constraint with a Garret Score of 30.7, ranked first. Environmental Impact and Price Fluctuations follow, ranked second and third with scores of 27.4 and 25.3, respectively. Other identified constraints include Limited Value Addition, Perishability, and Access to Markets, among others, with scores ranging from 23 to 17.1 for ranks IV to VII. Regulatory Barriers and Fluctuating Supply are the least significant constraints, ranked eighth and ninth with scores of 15 and 13.1, respectively. This indicates a prioritization based on the impact of these constraints, from most to least significant.

Access to markets, which includes the ability to reach buyers or enter new markets, is another notable challenge, ranked seventh (VII) with 17 respondents. Regulatory Barriers, encompassing the legal and administrative hurdles in the fish marketing process, is identified by 15 respondents, placing it in the eighth position (VIII). Lastly, Fluctuating Supply, which deals with the unpredictability of fish availability, is considered the least significant constraint with a frequency of 13, ranking ninth (IX).

CONCLUSION

The study conducted on the socio-demographic characteristics of individuals engaged in fish production in the designated area reveals significant insights into the patterns and dynamics of fish farming. Fish production is a vital livelihood that accommodates a wide range of participants, from small-scale operators, who form the backbone of the industry, to those involved in medium and large-scale operations. The demographic data indicates a youthful inclination towards medium-scale operations, suggesting an eagerness among the younger population to invest in

and grow within the aquaculture sector. Conversely, older participants prefer smaller scale ventures, possibly due to the lower physical demands and reduced risk involved. The findings underscore the need for targeted policies and support mechanisms that cater to the varied needs of fish farmers, promoting sustainable growth and inclusivity within the aquaculture industry.

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