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A Study on Price Spread and Marketing Efficiency of Fish Marketing in Nalgonda, Suryapet and Yadadri Bhuvanagiri Districts of Telangana

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Aim: To analyze the price spread and marketing efficiency in marketing of fish in Nalgonda, Suryapet and Yadadri Bhuvanagiri districts of Telangana state.
Study Design: The study was conducted in Nalgonda, Suryapet and Yadadri Bhuvanagiri districts of Telangana state during the year 2019-20. Nalgonda district was purposively selected as it has highest area under fish farming in Telangana. Suryapet and Yadadri Bhuvanagiri districts were part of undivided Nalgonda district before formation of new districts in Telangana in 2016. Hence, they were also included in the study.
Methodology: A sample of 60 fish farmers and 30 market intermediaries were randomly selected for the study. Primary data was collected from respondents using pre-tested questionnaire by survey method. Price spread, producers share in consumer rupee and marketing efficiency of fish were computed.
Results: Three marketing channels were found prominent for marketing of fish viz., Channel 1 (Fish farmer ⇨ Commission Agent/Trader ⇨ Wholesaler at Hyderabad ⇨ Retailer at Hyderabad ⇨ Consumer), Channel 2 (Fish farmer ⇨ Commission Agent/Trader ⇨ Wholesaler at Kolkata ⇨

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Retailer at Kolkata ⇨ Consumer) and Channel 3 (Fish farmer ⇨ Commission Agent/Trader ⇨ Vendor ⇨ Consumer). Among the three channels, Channel 3 was found highly efficient with marketing efficiency of 2.04% followed by Channel 1 (1.80%) and least for Channel 2 (1.33%).
Conclusion: Encouraging fish farmers to form into Co-operatives or Fish Farmer Producer Organization and bringing awareness in producers and consumers on daily prices of various fish species will help in developing the marketing of fish.

Keywords: Fish; marketing channel; marketing efficiency; price spread.

1. INTRODUCTION

India is the third largest fish producing country contributing 7% to the global fish production. The country had produced 10.43 MMT of inland fish and 3.72 MMT of marine fish in the year 2020 [1].

Telangana was newly formed land locked state where only inland fish production exists. Though the state is landlocked with no coastal line, it is the third largest inland water resource territory in the country with a total water spread area of 6,55,005 hectares which comprises of reservoirs and tanks. Fish production in the state had increased from 2.60 lakh tonnes to 3.76 lakh tonnes from the year 2014 to 2021 with compound annual growth rate of 5.42%.

Fish is the most perishable product, which has to be marketed either live or fresh. Market price of fish is determined by freshness, species and availability of fish in the market [2]. Thus much emphasis should be given for marketing of fish to reduce spoilage. Compared to achievements in fish production the fish marketing system is very poor and highly inefficient in India [3]. Fish marketing is crucial for achieving the target efficient production system and consumer satisfaction [4]. Growth of fish production and development of fisheries sector depends largely on an efficient marketing system [5]. However very few studies are available on production and marketing of inland fish in Telangana. With this brief background, this study aimed to analyse price spread and marketing efficiency of various channel involved in marketing of fish.

2. MATERIAL AND METHODS

The present study was carried out in Nalgonda, Suryapet and Yadadri Bhuvanagiri districts of Telangana state. Nalgonda district was purposively selected as it has highest area under fish farming. Suryapet and Yadadri Bhuvanagiri districts were part of undivided Nalgonda district before formation of new districts in Telangana in 2016. Hence, they were also included in the study. Fish farmers were widely scattered over a large number of villages. Therefore, fish farmers list was collected from District fisheries office in respective districts. A random sample of 60 fish farmers from the list were selected proportionately from three districts which includes 36, 10 and 14 fish farmers from Nalgonda, Suryapet and Yadadri Bhuvanagiri districts respectively. A sample of 30 intermediaries were randomly selected which include commission agents, wholesalers, retailers and vendors. Primary data was collected from respondents using pre-tested questionnaire by survey method. Marketing efficiency, Price spread and Producer's share in Consumer rupee was estimated by employing following statistical tools.

2.1 Marketing Cost

$$MC = Cf + Cm1 + Cm2 + Cm3 + \cdots + Cmi$$

Where,
MC = Total cost of marketing
Cf = Cost incurred by the farmer
Cmi = Cost incurred by the different intermediaries in the process of marketing of fish

2.2 Marketing Margin

MM=Pr-(Pp+Cm)

Where,
MM = Marketing margin
Pr = Price received by the intermediary (Sale price)
Pp = Purchase price of the intermediary
Cm = Cost incurred by the intermediary

2.3 Marketing Efficiency Analysis

The marketing efficiency was estimated by using the Acharya approach by Acharya and Agarwal (2001) [6]. In this approach the ratio of price

received by the fish farmer to the sum of marketing costs and marketing margins used as measure of marketing efficiency.

MME= FP/(MC+MM)

Where,

MME = Modified measure of marketing efficiency
FP = Price received by fish farmer
MC = Marketing costs
MM = Marketing margins

2.4 Price Spread

Price spread refers to the difference between price paid by the consumer and price received by the producer for equivalent quantity of the farm product. Price spread consists of marketing costs and margins of the intermediaries. It gives fair idea about relative efficiency of various marketing system and channels.

2.5 Producer's Share in Consumer's Rupee

The ratio of price received by the producer to the price paid by consumer is known as producers share in consumer rupee.

$$Producers\ share\ in\ consumer\ rupee = \frac{Net\ price\ received\ by\ producer}{Price\ paid\ by\ consumer}\ X\ 100$$

3. RESULTS AND DISCUSSION

There are 3 major marketing channels observed in the study area, through which fish reached the ultimate consumer. The different marketing channels observed were as follows.

a. **Channel 1:** Fish farmer ➡ Commission Agent/Trader ➡ Wholesaler at Hyderabad ➡ Retailer at Hyderabad ➡ Consumer
b. **Channel 2:** Fish farmer ➡ Commission Agent/Trader ➡ Wholesaler at Kolkata ➡ Retailer at Kolkata ➡ Consumer
c. **Channel 3:** Fish farmer ➡ Commission Agent/Trader ➡ Vendor ➡ Consumer

In the study area, most of the fish were marketed to Hyderabad and Kolkata indicated by Channel 1 and 2. In Channel 3, the fish was marketed in nearby villages through vendors. Direct marketing of fish from producers to consumes was negligible. Price spread, Producers share in consumer rupee were calculated for all the three marketing channels and indicated in the Table 1, while marketing efficiency was indicated in Table 2.

3.1 Price Spread

The price spread for Channel 1, 2 and 3 are given in the Table 1. The price spread was less for Channel 3 when compared to other channels as it involved a smaller number of intermediaries.

Table 1. Marketing costs, margin and price spread of different fish marketing channels

Particulars (□/Kg)	Channel 1	Channel 2	Channel 3
Farmer selling price/Commission agent purchase price	98.82	98.82	98.82
Cost incurred by commission agent	13.77	19.17	12.61
Margin	8.00	12.00	9.76
Commission agent selling price	120.59	129.99	120.59
Cost incurred by Wholesaler	12.32	12.25	-
Margin	3.68	6.00	-
Wholesaler selling price/Retailer purchase price	136.59	148.24	-
Cost incurred by Retailer	11.06	14.61	-
Margin	5.94	10.00	-
Retailer selling price	153.59	172.85	-
Cost incurred by vendor	-	-	15.51
Margin	-	-	10.60
Vendors selling price	-	-	146.70
Consumers purchase price	153.59	172.85	146.70
Price spread	54.77	74.03	47.88
Producer's share in Consumer's Rupee	64.34	57.17	67.36

Table 2. Marketing efficiency of different fish marketing channels

Sl. No	Particulars	Channel 1	Channel 2	Channel 3
1	Marketing Cost	37.15	46.03	28.12
2	Marketing margin	17.62	28	20.36
3	Price received by farmer	98.82	98.82	98.82
4	Marketing efficiency	1.80	1.33	2.04
5	Rank	II	III	I

3.2 Marketing Margin

From Table 1, it can be observed that in Channel 1, the commission agents received the higher margin per Kg of fish (8.00) followed by retailers (5.94) and wholesalers (3.68). In Channel 2, similarly the commission agents received the higher margin per Kg of fish (12.00) followed by retailers (10.00) and wholesalers (6.00). While in Channel 3 Vendor received highest margin (10.60) than commission agents (9.76).

3.3 Producer's Share in Consumer's Rupee

Producer share in consumer rupee was found to be highest for Channel 3 (67.36%) followed by Channel 1 (64.34%) and 2 (57.17%) respectively. There was less number of market intermediaries in the Channel 3 which resulted in the higher producers share in the consumer rupee.

3.4 Marketing Efficiency

The marketing efficiencies were calculated for marketing channels identified in the study area using Acharya approach (modified measure of marketing efficiency) and represented in the Table 2. The marketing efficiency was found highest for Channel 3 (2.04%) followed by Channel 1 (1.80%) and least for Channel 2 (1.33%). Thus, Channel 3 was found to be most efficient and Channel 2 as least efficient one.

These results are similar to the findings of Raj et al. [7,8] who also reported that the marketing efficiency was highest for the shortest marketing channel with less number of intermediaries.

4. CONCLUSION

The study revealed that Chanel 3 was the most efficient with marketing efficiency of 2.04. It was found that as the number of market intermediaries increases, the marketing efficiency of the channel decreases there by reducing the producers share in consumer rupee. Hence the farmers can form into groups like Cooperatives or Fish Farmer Producer Organizations by which they can reduce the intermediaries involved and earn the more share in consumers rupee. Bringing awareness in producers and consumers on daily market prices of various fish species will help in developing the marketing of fish.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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