

Case Study

Status and Prospectus of Ornamental Fish Market in Raipur City of Chhattisgarh

O.P. Sonvane* , B. Nightingale Devi, Basant Singh, Damini Chandravanshi, Himansu Shankar Nage and Varsha Sahu

College of Fisheries, Dau Shri Vasudev Chandrakar Kamdhenu Vishwavidyalaya, Kawarhdha, Dist. Kabirdham, Chhattisgarh, India

*Corresponding author: omprakashsonvane@gmail.com (ORCID ID: 0000-0003-2068-9821)

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ABSTRACT

The present study was under taken to know the current status of ornamental fish market in Raipur city. A total number of 12 ornamental fish shops were randomly selected. The ornamental fish shop of Raipur city were dominated by men and majority of them belongs to one religion About 60 per cent enterprisers were graduated. The ornamental fish shops were found to be the primary source of livelihood for these people and maximum units were retail outlets established in less than 2000sq.ft area. Fishes were imported mostly from Kolkata, Chennai and Mumbai whereas sometimes they bought fishes from foreign countries as well. Gold fish (*Carrasius auratus*) was the more preferred groups due to their high preference in market. Pelleted feed was commonly used by the enterprisers for feeding. Salt and $KMNO_4$ chemical used for treatment of fishes. The present study reveals that Raipur city of Chhattisgarh have wide varieties of ornamental fishes with great economic importance.

HIGHLIGHTS

- ① The Raipur city is center point of ornamental fish trade in Chhattisgarh due to advancement of transport facility and the demand of ornamental fishes for aquarium keeping has become increasingly popular in the state. The government of India has identified ornamental fish sector as one of the thrust area for generating employment opportunities.
- ① In Raipur city has few number of aquarium shops, in which they sell many ornamental fishes.
- ① Ornamental fish supply management contributing few no. of stakeholders in Raipur city.

Keywords: Ornamental fish, enterprisers, livelihood, Ornamental fish shops

Ornamental fishes are referred as living jewels of aquatic body. Ornamental fish and accessories shop is the one of the newly and native business model in Chhattisgarh. In the state Goldfish & Molly are the common fish varieties in aquarium shop. Many entrepreneurs bring the ornamental fishes from Kolkata, Chennai & Mumbai. The climate of the state is mainly humid and sub-humid. It is favorable for good health of ornamentals fishes. Very beautiful indigenous fish varieties available from four river network: Mahanadi, Godawari, Ganga and Narmand. In this network, 31 large, small rivers and tributaries. A total 61 species under 41 genera, 22 families and 7 order were recorded from three rivers

Mahanadi, Mand and Kelo; two reservoirs Chinkari and Kedar & three village ponds (Patel *et al.* 2016). Yet form, ornamental fishes imported from out of states and few no. of stakeholders involvement of supply chain management of ornamental fish.

Hence, ornamental fish market and supply management one of the most promising business for enhancing income and employment of youth & Gaothan's SHG members. Keeping the importance

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of the development of ornamental fish & accessories market in the state, a study on status and prospectus of ornamental fish market in Raipur city of Chhattisgarh has been attempted in this study.

METHODOLOGY

(A) Sampling procedure

1. Study area: Raipur city situated in the centre of Chhattisgarh (21.2514° N, 81.6296° E) and covers an area of 13,083 km².

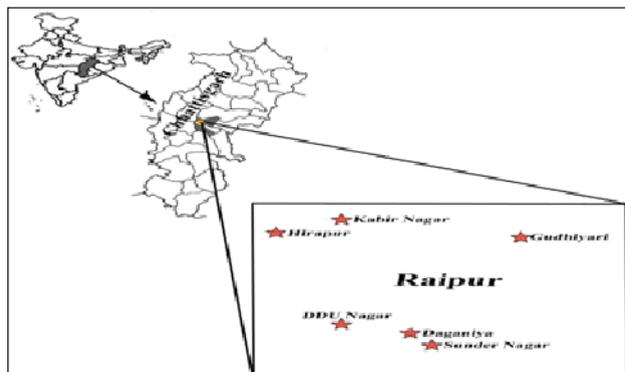


Fig. 1: Study area of Chhattisgarh State

2. Selection of ornamental fish shop

Raipur city has four clusters i.e. Raipur East, Raipur West, Raipur North and Raipur South. All ornamental fish shops were selected from each cluster.

Method of data collection

The study was based on primary data. The primary data were collected through survey by using personal interview method for this purpose. It contains information regarding demographic features of ornamental fish entrepreneurs such as gender, religion education, occupation, ownership of enterprises and information about ornamental fish enterprise such as area of fish unit, fish varieties, use of chemicals, probiotics, recurring expenditure and accessories.

Analytical tools

Garret ranking (Kumar & Kumar, 2008) technique was adopted to analyse the constraints faced at different ornamental shop owner.

$$\text{Percentage position} = 100(R_{ij} - 0.5)/N_j$$

Where,

R_{ij} = Rank given for i^{th} factor by j^{th} shop owner

N_j = Numbers of factor ranked by j^{th} shop owner

RESULTS AND DISCUSSION

1. Demographic features of ornamental fish entrepreneurs

Gender: In this study, it was observed that male (91.67%) entrepreneurs were significantly higher than that of female (8.33%) entrepreneurs. Ornamental fish enterprises is a full time job and required more time may be a difficult task for housewives. This may be one of the reason for dominance of male among ornamental fish entrepreneur during the present study.

Religion: Among the ornamental fish entrepreneur from Raipur city dominance of people from Hindu (75 %) religion was highest followed by Muslim (16.66%) and Christian (8.33%). Most of the population of Raipur are Hindu religion, this could be reason for dominance of more people of this religion in ornamental fish enterprises.

Education: It was observed that maximum contribution of ornamental fish entrepreneurs (58.33%) was educated up to graduation level. It is concluded that the entrepreneurs with high qualification may be earning more money from this enterprise.

Age: The involvement of youth (21-30 year) is more than that of other age group of entrepreneurs. Young people that have higher qualification can easily understand the increasing market demand of ornamental fish enterprises. At present days young people need job and money for their livelihood they understand that ornamental fish enterprise is easy way to earn money.

Occupation status: The present study revealed that majority (91.67%) of ornamental fish entrepreneur were undertaking this entrepreneurship as primary occupation and Only 8.33% undertaken as secondary occupation.

Ownership: Ownership of enterprise plays a major role for increasing profit. In this present study all ornamental fish entrepreneurs (100%) were found to be operate their own unit. All unit observed in our study were own establishment.

CHARACTERISTICS OF ORNAMENTAL FISH ENTERPRISE

Area of unit: Present study shows that ornamental fish unit categorised on the basis of the area occupied by the unit maximum number of ornamental fish shop of Raipur city (42%) were established in 50-250 sq.ft area, out of this minimum area about 50 sq.ft and maximum area about 1850 sq.ft area found for trading of ornamental fish unit.

Source of supply and transportation facility: The Present study shows that most of the entrepreneurs bring their fishes mostly from Kolkata (91.66%) followed by Chennai and Mumbai and others also and few of them import their fishes from foreign country (16.66%) also like Indonesia, Singapore and Malaysia.

They were transported their fishes mostly via railway and some entrepreneur through air route (16.66%). The advancement of transport facility is one of the reason that Raipur city has many number of ornamental shops and entrepreneurs of Raipur city does not face any problem in transportation from other states and also from foreign country.

Packaging and breeding facility: It was observed that the only some entrepreneurs about 33.33% were used packaging machines other than that of maximum entrepreneur were not used packaging machine for packing of live fishes during selling. Only some of enterprises had breeding facility of fishes like guppy and molly in their unit (25%) due to lack of knowledge about breeding and breeding season of fishes and maximum number of breeding and rearing unit required cemented

tank for breeding of fishes. This may be the reason that only few of the entrepreneur kept the breeding facility in their unit.

Feed: In the present study, it was observed that almost all entrepreneur used artificial pelleted feed (91.66%) and only one entrepreneur used both dry and live food like Cyclops, brine shrimp, earthworm. Feed is one of the important and essential inputs in ornamental fish enterprise. Unavailability of live feed in sufficient amount may be the reason for limited use of live food.

Chemicals and medicines: It was observed that all the ornamental fish entrepreneurs used salt and malachite green as a chemical and oxy tetracycline, tetracycline, potassium chloride, methylene blue, potassium permanganate as common chemical and only one entrepreneur used self formulated medicine.

Fish varieties: In the present study, it was observed that gold fish and molly were the common fish varieties kept by all 100% of the entrepreneurs in their shops. Common gold fish varieties such as oranda gold, shubunkin, black gold fish, orange cap gold fish were found in ornamental fish shop of Raipur city. Demand of gold fish in Raipur was very high that's why 100% entrepreneurs kept gold fishes in their shops. This verity can be easily maintained by hobbyists and are attractive as well as cost effective (price range ₹ 30-250) this could be a reason for high demand if this verity.

The environmental condition in Raipur city showed similar temperature range and therefore, most of the entrepreneurs kept these varieties because no

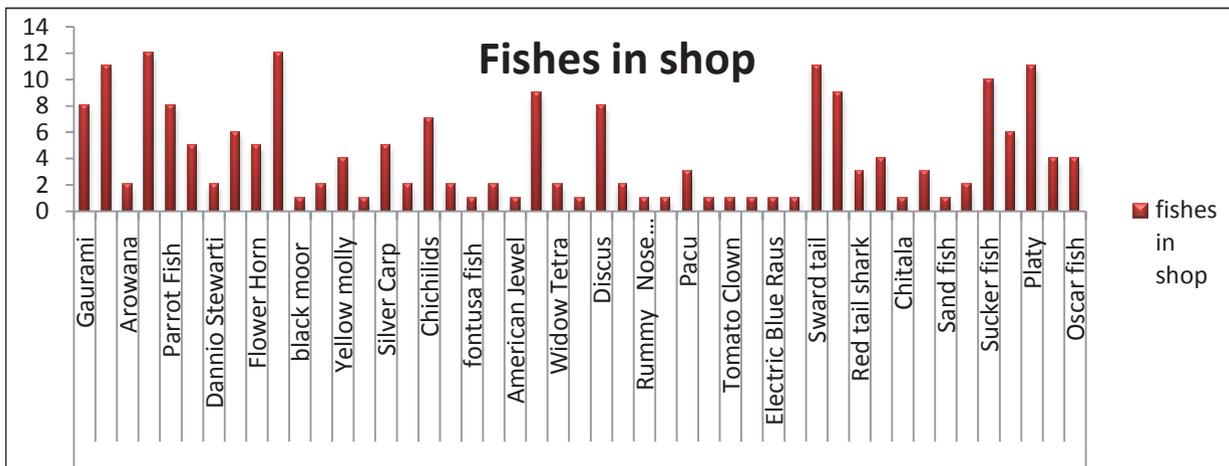


Fig. 2: Availability of fish variety in selected shop

Table 1: Accessories status in selected ornamental fish shop in Raipur City

Sl. No.	Facilities	No. of entrepreneurs	Percentage
Tanks			
1	Glass tanks	12	100%
2	Overhead tank	6	50%
3	Water supply items	6	50%
4	Electric water pump	8	67%
5	Pipe line	8	67.00%
Electrical items			
6	Electrification	5	41.66%
7	Lights and its fixtures	9	75%
8	Generator /Inverter	7	58.33%
Water treatment equipments			
9	Biological filter	6	50%
10	Sponge filter	10	83.33%
11	Power filter	9	75%
12	Ozoniser	1	8.33%
Life saving equipments			
13	Aerator	12	100%
14	Blower	12	100%
15	Oxygen Cylinder	4	25%
16	Water heater	12	100%
17	Water parameter analysis equipments		
18	Dissolved oxygen meter	4	25%
19	pH meter	7	58.33%
20	Thermometer	8	66.66%
21	Refractometer	2	16.66%
22	Tank Housing		
23	Rack	12	100%
Other Facilities			
24	Hand net	12	100%
25	Packaging machine	4	25%
26	Weighing machine	6	50%
27	Feeding trays	2	16.66%
28	Toys	12	100%
29	Microscope	0	0%

extra effort needed for maintaining the temperature. During study, only one marine ornamental fish shop was found, though in Chhattisgarh natural sea water is not found hence artificial sea water was made to kept marine ornamental fishes.

Accessories: In the present study, it was observed that all (100%) of the ornamental fish shop possessed assets like glass tank, aerator, blower, water heater toys, hand net and sponge filter. Most of the enterprises had electric water pump and inverter. A capacity of glass tank was found 60-100 litres in ornamental shop of Raipur city.

CONCLUSION

The study revealed that capital of Chhattisgarh, Raipur city have wide varieties of ornamental fishes and the demographic profile of entrepreneurs were higher than female entrepreneurs, most of entrepreneurs belong from same religion and also found that most of them were young and graduated Ornamental fish shops were established in 50-250 sq ft., entrepreneurs bring their fishes from Kolkata, Chennai and Mumbai. Gold fish and molly were common variety kept by all entrepreneurs and almost all ornamental fish shop possessed assets

like aerator, blower, hand net, toys *etc.* Ornamental fish breeding lab will be opened and raised no. of training on aquarium fabrication and maintain in the study area.

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