INTERNATIONAL JOURNAL OF SCIENCE AND NATURE

www.scienceandnature.org

IMPACT OF ORNAMENTAL FISH CULTURE TRAINING PROGRAMMES ON EMPOWERMENT OF BENEFICIARIES IN TUTICORIN DISTRICT OF TAMILNADU

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ABSTRACT
The study was conducted among trainees who were trained on the ornamental fish culture in Fisheries College and Research Institute, Thoothukudi. To study the socio-personal characteristics of the ornamental fish culture trainees this research was done in three blocks of the Thoothukudi district of Tamilnadu *viz*., Thoothukudi block, Srivaikundam and Alwarthirunagari. A sample size of 120 trainees was selected from these blocks by using Proportionate Random Sampling Technique. The respondents were interviewed by using the interview schedule consists of six independent variables. It was observed that about two-fifths of the respondents were found in the category of middle aged. Regarding educational status, middle school level of education was the predominant category. A majority of the respondents had nuclear family and more than three- fourths had up to 5 members in their family. The majority of the trainees were unemployed, but their whole family income was considered. Among all the respondents, more than half of them had medium level income. Among all the respondents, more than half of them had medium level income. Most of the trainees were interested in watching television. In case of knowledge, a majority had medium level knowledge on ornamental fish culture.

KEY WORDS: Trainees, ornamental fish culture, socio-personal characteristics.

INTRODUCTION

Aquarium keeping is amongst the most popular of hobbies with millions of enthusiasts worldwide (Livengood and Chapman, 2006). Due to low production cost, higher returns in a very short time span and involvement of a wide variety of ornamental fish species, there is a ever growing demand for these both in the domestic and international markets. Since 1985, the value of international trade has increased steadily, touching US$ (350 million in 2007 and developing nations contributed two third of the total export value (FAO, 2007). The wholesale value of the global ornamental fish trade is estimated to be US$ 1 Billion while the retail value is US$6 Billion. The entire industry, including accessories and fish feed, is estimated to be worth around US$18-20 billion. The trade with an annual growth rate of 8 percent offers a lot of scope for development. About 120 countries import ornamental fish. The major importer is European Union (EU), followed by North America and Japan. Singapore is the largest exporter for many years and exports more than double that of the top five exporters for the last 2-3 decades. India is endowed with a suitable climate, abundant water resources, rich biodiversity and large manpower base. However, India's share in global ornamental fish trade is negligible and at present the ornamental fish export from India is dominated by the wild caught species. Moreover, the unit value of ornamental fish is higher than the food fish. Hence, this sector offers the good opportunity for rural and urban households to augment income and link them to the International trade. Almost all of the tank bred ornamental fish in India comes from the small-scale or back yard type of breeding units. But due to the lack of adequate infrastructure and key inputs like appropriate feed, quality brood stock etc these breeding units are not in a position to produce high quality fishes in bulk quantity, which is the major requirement in the international trade.

However, the greatest volume or number of individuals in the trade, some 90-96% is of freshwater origin and is produced in commercial aquaculture facilities (Chapman *et al.*, 1997; Cato and Brown, 2003). Although some marine aquarium fish and invertebrates are aquacultured by the industry and hobbyists, most of the marine ornamentals over 90% are from wild caught fisheries and generally command higher prices than freshwater fishes (Chapman *et al.*, 1997; Cato and Brown, 2003). Facilities for the production of aquarium fish are often small compared to major food fish production operations (Chapman, 2000). In traditional subsistence fisheries, fishermen use primitive and inefficient gear to capture most aquarium fish. However, the supply of aquarium fish is not inexhaustible and signs of over-fishing are becoming apparent in localized areas. With the high demand and pricing of many beautiful species, ornamental fishes are being harvested at greater volumes and higher rates, threatening the viability or sustainability of the fishery (Chao *et al.*,2001, Gil and Martinez, 2001; Vagelli and Erdamann, 2002; Cato and Brown, 2003; Lunn and Moreau, 2004). To avoid these risks and to increase the empowerment status of the farmers as well as fishermen

the fisheries departments should conduct awareness programmes as well as training programmes on ornamental fish culture and handling.

By considering the above statements, it is worthwhile to call the fish farmers, SHG women and unemployed people as a mass movement on a national scale for the development and empowerment of the poor and downtrodden in the country. The state department of fisheries, MPEDA, Fisheries College and Research Institute are presently providing various kinds of training programmes in fisheries, for the upliftment of the socio-economic position. In this background, a study was conducted to analyze the socioeconomic status of the ornamental fish culture trainees of Fisheries College and Research Institute, Thoothukudi.

METHODOLOGY

The study was conducted in Thoothukudi district of Tamilnadu. Among 12 blocks of this district, four blocks were selected. One block was selected for the pilot survey to know the accuracy of the interview schedule; three blocks were selected for the study based on the maximum number of trainees attended for the ornamental fish culture training programmes. The respondents were selected, who were attended to the ornamental fish culture training programmes during the period 2002-10 in Fisheries College and Research Institute. Approximately the total numbers of trainees trained in this institute by various departments are 1,560 among these a total of 120 respondents were selected for this study.

From the selected blocks, 20 respondents were selected from the Ottapidaram block for the pilot study, 50 respondents were selected from Thoothukudi block, 35 from Srivaikundam and 35 from Alwarthirunagari for the main survey. These sample sizes are taken based on Proportionate Random Sampling.

Some of the independent variables were selected to study the objective or dependent variable those are, Age, Educational status, Family status, Occupational status, Annual income, Information source exposure and Knowledge level. The data were collected through interview schedule from 120 respondents. The data were analyzed by using statistical methods like percentage analysis, mean, standard deviation, correlation coefficient *etc*.

RESULTS & DISCUSSION

The results of the study revealed that, 40.83% of the trainees of ornamental fish culture were middle aged, 34.17 were young aged followed by 25% is the old age category. 44.17% of the trainees were middle level in their educational status followed by primary (19.17%), secondary (15.83%) functional illiterates (10.83%), collegiate (10%) and finally there are no illiterate respondents. More number of ornamental fish culture trainees belonged to the nuclear family with the percentage of 70.83, followed by joint family (29.17%). This distribution might have significantly influenced the size of the family too. Hence, it was found that most of the families had up to 5 members (75.83%), remaining 24.17 per cent families had above 5 members. This finding is in line with the findings of Karumalaikannan (2005) and Sathishkumar (2008). Regarding the occupation, majority of the trainees (75.83%) of ornamental fish culture are don't have any employment because, all of them are housewives. Some of the trainees (14.16%) were doing their jobs other than fisheries and 6.67% trainees had ornamental fish culture as secondary occupation followed by 3.34per cent of as primary occupation. Among the 120 respondents, 108 trainees were not adopted the ornamental fish culture and had their expenditure on the food, clothing and education with a total average of RS 88,310. The majority (72.79%) of their expenditure is on food followed by education (14.69%) and clothing (12.52%). Regarding the expenditure on the fisheries activities only 12 respondents had their expenses on an average of RS 1,39,000/- (53.55%) on fisheries activities and RS 6,000/- (2.32%) on fisheries and allied activities. Later to the expenditure on fisheries activities the respondents had their expenses on food (31.54%), followed by the clothing (6.69%) and education (5.90%). Majority of the respondents were women and about 74.18 per cent of the respondents were unemployed, but their whole family income from other sources was considered. Among all the respondents, more than half of them (55%) had medium level income followed by high income (37.5%) and finally 7.5% of the respondents had low income. Economic motivation is one of the strong forces to arouse and direct desirable contacts. The level of economic motivation that existed among respondents is given in Table I. It indicates that 96.67% trainees are strongly agreed for ornamental fish culture was to earn much money within the less land followed by 3.33% respondents agreed with this. On the other hand, 73.34% trainees agreed on farmers should invest on ornamental fish culture to get more profits within short period of time, 25% strongly agreed to this and 0.83% remained undecided as well as disagreed with this statement.

TABLE I. Economic motivation of the trainees (N=120)

Sl. No	Statement	SA	A	UD	DA	SDA
1.	Ornamental fish culture main purpose is to earn much money within the less land	96.67	3.33	---	---	---
2.	Farmers should invest on ornamental fish culture to get more profits within short period of time	25	73.34	0.83	0.83	---

Credit orientation has been measured to assess one's perception about credit as well as utilization facilities available. More than half of the respondents (55%) had medium level of credit orientation, followed by high (30.83%) and low (14.17%) levels. It could be concluded that majority of the respondents or trainees were women and about 74.18 per cent of the respondents don't have any employment, but their whole family income from other sources was considered. Among all the respondents, more than half of them (55%) had medium level income followed by high income (37.5%) and finally 7.5 per cent of the respondents had low income.

TABLE II. Material possession of adopted respondents n=10)

Sl. No	Type of material	Number	Percentage
1.	Earthen fish ponds	---	---
2.	Cement cisterns	7	70
3.	Glass tanks	10	100
4.	Motor and pump	8	80
5.	Water supply system	10	100
6.	Electrical and power generation system	4	40
7.	Oxygen cylinder	6	60
8.	Nets	10	100
9.	Aerator	10	100
10.	Filter	6	60

Among the 120 respondents only 12were working in ornamental fish culture field, within them 10 respondents had material possession remaining 2 were working as technicians; among the 10 respondents, all (100%) had glass tanks, water supply, aerators and nets. Interestingly no one had earthen fish ponds. The remaining materials and their possession are given in Table II. As far as social participation level of respondents is concerned, majority (69.17%) of the respondents had the medium level of social participation followed by high (15.83%) and low (15%) levels. It could be seen from Table III that, very minimum number of respondents had the contact with the KVK and State Fisheries departments, whereas nobody had contact with the NGO. Majority (79.16%) of the respondents had medium level of scientific orientation followed by high (14.17%) and low (6.67%) level of scientific orientation. Regarding the Knowledge level is concerned majority of the trainees of ornamental fish culture (70%) had medium level knowledge, 16.67 % of the respondents had high level followed by 13.33 per cent had low level. This finding is supported by the findings of Sathishkumar (2008).

TABLE III. Extension linkage status of the trainees (N=120)

Sl. No	Category	D	W	M	0	N
1.	KVK	0.83	0.83	4.18	0.83	93.33
2.	NGO	---	---	---	---	100
3.	State Fisheries departments	3.33	0.83	1.67	---	94.17

D=Daily, **W**=Weekly, **M**=Monthly, **O**=Occasionally, **N**=Never

TABLE IV. Correlation between the profile of the respondents and their empowerment (N=120)

Variables No.	Independent variables	r – value
X1	Age	0.032NS
X2	Educational status	0.173NS
X3	Occupational status	0.446**
X4	Family status	0.101NS
X5	Farming experience	0.135NS
X6	Annual expenditure	0.494**
X7	Economic motivation	-0.298**
X8	Credit orientation	-0.055NS
X9	Training needs	0.107NS
X10	Information source exposure	0.108NS
X11	Material possession	0.162NS
X12	Social participation status	-0.051NS
X13	Extension linkage system	0.039NS
X14	Scientific orientation	-0.021NS
X15	Risk orientation	-0.066NS
X16	Self confidence	-0.003NS
X17	Innovativeness	0.020NS
X18	Knowledge level	0.071NS

* - Significant at 5% level, ** - Significant at 1% level, NS – Non-significant

Relationship between the profile of trainees of ornamental fish culture and the empowerment status of the trainees

It could be observed from the table IV that, Occupational status, Annual expenditure have significant relationship to the empowerment and Economic motivation had established negative significant relationship with the empowerment is concerned at 0.05 level. Remaining 15 variables were showing non-significant relationship, among them Credit orientation, Social participation, Scientific orientation, Risk orientation, Self confidence have exhibited negative non-significant relationship with the empowerment of the trainees, followed by Age, Education status, Family status, Farming experience, Training needs, Information source exposure, Material possession, Extension linkage, Innovativeness and Knowledge level showing positively non-significance with the empowerment.

CONCLUSION

The educational status of the respondents can be better utilized by organizing and conducting some more training programmes to the unemployed youth for making them job providers rather than job seekers. Regarding the family

status three fourths of the respondents had up to 5 family members in their family. A vast number of respondents are watching the television regularly. This can be utilized for communicating or to pass on the information rapidly. The knowledge level of the trainees was found to be medium. Hence, the Government and Non- Government organizations conduct short term and need based training programmes on new innovations for the welfare of unemployed women and men in their village itself. Based on the survey we can conclude that more than half of the respondents had medium level income followed by high level income, so if the banks provide loans liberally there may be a great chance to adopt the ornamental fish culture among the trainees.

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