

ORNAMENTAL FISH BREEDING AND CULTURE - AN IMPACT ANALYSIS

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ABSTRACT : Effect of training was studied on 40 trainees participated in 3 days training programme on "Ornamental Fish Breeding & Culture" organized at Dakshin Dinajpur Krishi Vigyan Kendra of Uttar Banga Krishi Viswavidyalaya, Dakshin Dinajpur, West Bengal, India. Knowledge and attitude of fish farmers self-help group were studied before and after training towards ornamental fish breeding and culture. The results indicated that there is a significant gain in knowledge and increase in favorable attitude were noticed among the participants after training. All trainees had favorable and innovative attitude towards ornamental fish breeding and culture. The overall gain in knowledge was high in respect to breeding and larval rearing of live bearing ornamental fishes, commercial farming of live bearers and its management practice, feeding for breeding and maintenance of ornamental fishes, water quality in ornamental farming, disease management in ornamental fish farming.

Key words : Ornamental fish culture , Attitude, Training.

INTRODUCTION :

Training refers to an act, process or method of one who trains. Training indicates a planned activity to which a person is subjected to induce learning. Training is an important mechanism for human Resource Development and transfer of technology. It is a crucial need for any rural development. This can be defined as reciprocal process of teaching and learning, a body of knowledge and related methods of work. Training means to educate a person so as to be fitted, qualified, and proficient in doing some job. For an Extension worker, training includes the education which aims at bringing a desirable change in the behavior of the trainee or the learner. This change requires a change in his knowledge, skill, attitudes, values, beliefs and become qualified and profi-

cient in communicating the desirable knowledge of his client system. Training is concerned with preparing the participant for certain lines of action that are delineated by technology and by the organization in which he works and which also improves his performance in it (Lynton and Pareek 1967).

Training is a powerful tool to catalyze human resources to improvise professional empowerment. It is a sequential process and steps of social development through which efficacy (in terms of knowledge and skill) and stability of society can be improved considering various concomitant social problems. Ornamental fish has marked as a resource with good economic potential in recent years. Considering the increasing domestic demand and ready export market the ornamental fish breeding and culture offers

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enormous scope for its adoption both at small scale and as commercial enterprise. Though India possess congenial environmental conditions for ornamental farming, this sector has not received yet due attention as it ought to be (Chand *et al.* 2003). There is a strong need to culture and commercialize ornamental fish farming. Ornamental fish culture should move from being just a mere culture, to a dynamic entity *i.e.* ornamental fish culture business as an entrepreneur, which will be reflected in advanced economy of rural areas entrepreneurial qualities of ornamental fish farmers can be developed through systematic and planned training programmes.

Considering the above facts a 3 days training on ornamental fish culture and breeding for fish farmers for awareness development was organized by Dakshin Dinajpur Krishi Vigyan Kendra, Uttar Banga Krishi Viswavidyalaya. The training can be more effective if oriented according to the participant's needs, socio-economic factors such as age, education, season etc. also play an important role on the knowledge and attitude of the participants of the training.

Considering the above facts in view, an attempt has been made in the present study to assess the knowledge and attitude of trainees towards ornamental fish breeding and culture at pre and post training to analyze whether the short term training is helpful in bringing desirable changes in attitude and disseminating the technological knowledge towards rural aquaculture entrepreneurs.

MATERIALS AND METHODS :

The study was conducted with the fish farmers' SHGs of Dakshin Dinajpur district, West Bengal. A batch of 40 participants from four blocks of two subdivision were selected by following the simple random sampling techniques (choosing sample from 5 Self Help Group) for a 3 days training programme on ornamental fish breeding and culture for the above programme. A structured interview schedule was

prepared encompassing various aspects of ornamental fish breeding and culture to assess the knowledge level of participants.

The questions on attitude consists of seven positive and seven negative statements as indicated in Table 1. Two types of attitude statement were included in the schedule to minimize the possible response sets of subject that may be generated if only possible favorable or unfavorable statements were included (Edward 1969). The knowledge level of trainees in relation to ornamental fish breeding and culture was measured by assigning scores. The score was made by giving two questions in each of the ten topics and each question carry equal marks (5). The interview schedule was placed before and after the training programme through pre-training and post-training schedule and the testing of the mean knowledge level of trainees was done accordingly through scoring (on percentage basis). The study was conducted employing 'Before-after' design as recommended by Likert (1932). Based on the total knowledge and attitude scores, the participants were classified into medium and high knowledge and moderate and high favorable attitude. The impact of training on attitude and knowledge on ornamental fish breeding and culture was also measured by socio-economic profile of the farmers.

RESULTS AND DISCUSSION :

The study (Table 1) revealed that 45 percent of the participants have medium levels of knowledge and 30 percent of the participants have high favorable attitude towards ornamental fish breeding and culture prior to the training programme. Most of the participants acquired knowledge and developed high favorable attitude during training. The total gain in knowledge was significantly high in respect to breeding and larval rearing of live bearing ornamental fishes, commercial farming of live bearers and its management practice, feeding, breeding and maintenance of ornamental fishes, water quality in orna-

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mental farming, disease management in ornamental fish farming (Table 4). The majority of trainees belonged to < 50 years age group and have education with higher secondary. The knowledge gain and positive attitude due to training in all categories was significant (Table 2 & 3).

Before training majority of trainees having poor knowledge and unfavorable attitude towards ornamental culture and breeding. The apparent high level of knowledge was noticed among < 50 years age groups and B.Sc. educated trainees (Table 5). Pre-post facto training indicated that this categories are more interested about ornamental fish breeding and culture and have relatively high degree of perception together more knowledge about this innovative technology as reflected by their positive interaction in the valedictory session. The significant increase in knowledge and favorable attitude among the par-

ticipants due to training implies that the participants irrespective of their socio-economic profile might have showed greater interest in the profitability of information about ornamental fish breeding and culture used in training programme.

The change in positive attitude of trainees observed after training with practical session can be attributed for imparting knowledge regarding ornamental fish culture laboratory, field visit to various aquarium shop and field demonstration of ornamental fish breeding and culture. The participant gained high level of knowledge regarding ornamental fish culture and breeding which may possibly be due to keen desire of trainees to adopt and disseminate this innovative practice so as to obtain higher return.

CONCLUSION :

Table 1 : Attitude statement on various aspects of ornamental fish breeding and culture.

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Sl. No.	Attitude statement
1.	Ornamental fish breeding and culture is a viable economic activity.
2.	Ornamental fish breeding and culture will be much easy with effective training.
3.	Adoption of ornamental fish breeding and culture increases employment opportunities for female members of the family.
4.	Ornamental fish breeding and culture involves innovative scientific methods.
5.	Ornamental fish breeding and culture involves negligible risk.
6.	Formation of co-operative society by the farmers will facilitate the ornamental fish trade.
7.	Ornamental fish culture has excellent export potential .
8.	Ornamental fish breeding and culture is possible only for progressive farmer.
9.	Ornamental fish breeding and culture need adequate amount of money.
10.	Ornamental fish culture require large amount of land.
11.	Subsidies are essential for success in ornamental fish culture.
12.	Disease problem is an important factor for ornamental fish culture.
13.	Ornamental fish culture comes in the way of crop production of farmers.

Table 2 : Impact of training on knowledge of trainees.

Knowledge	Before		After	
	Number	Percentage	Number	Percentage
Medium	35	87.5	15	37.5
High	5	12.5	25	62.5
Total:	40	100	40	100

Table 3 : Impact of training on attitude of trainees.

Favorable attitude	Before		After	
	Number	Percentage	Number	Percentage
Moderate	30	75	38	95
High	10	25	2	5
Total:	40	100	40	100

Table 4 : Mean knowledge score (%) on different aspects covered in training .

Sl. No.	Topic	No. of question	Knowledge score	
			Before training	After training
1.	Major ornamental fish, their trade and market potential – an overview	2	40	70
2.	Breeding and larval rearing of live bearing ornamental fishes	2	30	80
3.	Breeding and larval rearing of egg layers (gold fish, koi carp, barbs, danios and nest builders)	2	50	70
4.	Commercial farming of live bears and its management practice	2	30	90
5.	Feeding for breeding and maintenance of ornamental fishes	2	30	90
6.	Establishment of ornamental fish breeding cum rearing unit for private entrepreneurs	2	40	70
7.	Marketing possibilities and extension of ornamental fish	2	40	70
8.	Water quality of ornamental fish farming	2	30	80
9.	Aquarium fabrication and design	2	50	70
10.	Disease management in ornamental fish farming	2	30	90

Table 5: Socio-personal profile of the trainees.

Variables	No. of trainees	% of trainees (N = 40)
Age :		
Less than 50 years	5	12.5
50 years and above	35	87.5
Educational status :		
H.S.	25	62.5
B.Sc.	12	30.0
M. Fc.	3	7.5
Experience in ornamental fish culture :		
Less than 5 years	30	75
More than 5 years	10	25
Sex category of the trainees :		
Men	24	60
Women	16	40

From the above mentioned study it may be concluded that the ornamental fish farming would be the utmost interest of the farmers and entrepreneurs, especially among unemployed youth for establishment of small scale units of ornamental fish culture. In future this activity will usher a significant development in the fisheries sector (Swain and Bandopadhyay 2002) which further bring a massive social development.

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