A Study on the Effectiveness of Training Programmes in the Promotion of Inland Fisheries in Kerala

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Abstract

The yield from marine capture fisheries is showing a declining trend year after year. Therefore, the Inland fisheries have to play an important role in providing rich food for poor people. The expansion of inland fish production will depend upon many factors like development of necessary infrastructure and marketing facilities and easy availability of required inputs. But the most important factor is the need for a system of information transfer from the research and development centres to the farming households. A gap exists between the plans and projects of concerned authorities and the implementation of these by the farmers in the production and marketing practices. This problem can be solved to a great extent, by arranging training programmes to the farmers. But the studies for measuring the effectiveness of training programmes are very few in number. Here, this study propose to analyse the effectiveness of training programmes in the adoption of production and marketing practices of fresh water and brackish water farmers in Kerala. The results of the study reveals that effectiveness of training programmes is more in brackishwater farmers and recommends to the authorities that special efforts should be taken to strengthen its effectiveness in fresh water farming.

Keywords: Inland Fisheries, Fisheries training programmes, Marketing Practices, Production Practices

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Aquaculture extension is an important link connecting research systems and farmers. It is an instrument to bring about social and technological change by playing the dual role of disseminating technology to the farmers in the field and conveying back their problems to the research system. Sustainable fisheries should be rich in technology and information with less intensive energy uses. The success of any extension activity depends on two processes, diffusion and adoption. The diffusion process refers to the spread of new ideas from the original source to the ultimate users. In the case of aquaculture, it is the process by which new farm practices or innovations are communicated from sources of origin. Certain guidelines should be prepared and communicated for implementation to ensure sustainable utilization and management of inland fisheries resources. The adoption process is a mental process through which an individual passes from first hearing about a new idea to its final adoption. There are five stages in the adoption process like awareness stage, interest stage, evaluation stage, trial stage and adoption stage. In the awareness stage, a farmers gets information about a new method. In

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the second stage he becomes interested in that method due to any of its advantage. Then he evaluates all its aspects and tries to make a trial. When he becomes satisfied with the results, he enters the adoption stage. There should be efficient training programmes for the smooth fulfillment of these processes.

Literature Review

1. Srivastava,UK (1999) in the study 'Fresh water aquaculture in India' made an attempt to evaluate the functions of Fish Farmers Development Agency and found that majority of the farmers are still unaware of sophisticated production methods.
2. Sultan (2000) in his study made an attempt to study the impact of the programmes of FFDAs and opined that the agency is not doing well in the marketing of fisheries products.
3. Daisy C Kappen(2006) in her study revealed that majority of the fresh water and brackish water farmers have only medium level knowledge about production practices.
4. Vinayagram (2017) in his study reports that extension activity should be strengthened to reduce environmental pollution.

The literature reviewed for the study shows that training programmes are important for attaining the targets in the production and marketing of inland fisheries products. Majority of the farmers have a medium level of knowledge about sophisticated techniques and methods and the training programs need to be strengthened for promoting sustainable farming practices.

Statement of the Problem

Kerala is rich in inland water resources. It has fresh water resources like private ponds, panchayat ponds, quarry ponds, holy ponds, irrigation tanks, private sector fresh water farms, public sector fresh water farms, fresh water springs, fresh water lakes, water falls, rivers, reservoirs, check dams and bunds. Its brackish water resources include backwaters, prawn filtration fields, public and private sector brackish water farms, estuaries and mangrove area. Seven percent of the total inland water resources is in Kerala. But the contribution of the inland fisheries production is only 24 per cent of the total fish production as against the national contribution of 71 per cent (Economic Review, 2019). The reason is lack of awareness and implementation of farmers about modern practices of inland fisheries production and marketing. Only through providing adequate training programmes, this problem can be solved.

Significance of the Study

Literature Review recommends the need for strengthening the inland fisheries extension programmes by providing new information, technology transfer and research and development in the aquaculture sector. Therefore, the government of Kerala, through the Department of Fisheries and allied institutions has taken steps for increasing inland fish production stage by stage. In all Five year plans, the allocation for inland fisheries sector shows an increasing trend and a large number of diversified schemes and projects are organized for ensuring the adequate extension programms.A significant amount of extension work is being carried out in the form of training programmes to farmers. Therefore, it is very essential to analyse to what extent these training programmes contribute towards application of modern and scientific production, harvesting and marketing practices.

Methodology

The primary data were collected from 150 freshwater farmers from the district of Palaghat and 150 brackishwater farmers from the district of Kollam randomly selected using simple random sampling technique from the register of Matsyasamrudhi project of Department of Fisheries using a structured interview schedule. ANOVA is used for studying the level of influence of training programmes in the application of production and marketing practices both in fresh water and brackish water resources. The secondary data were collected from the Fisheries Global Information System (FIGIS) of FAO, publications of the Department of Animal Husbandrying and Dairying, National Fisheries Development Board, Department of Fisheries, Government of Kerala and State Planning Board.

Objectives of the study

The main objective of the study is to find out the effectiveness of training programmes in the application of sustainable production and marketing practices in fresh water and brackish water resources.

Results and Discussions

Effectiveness of Training programmes in the application of production practices

Inland fishermen have to follow a systematic method while locating the site, preparing the pond, determining the type of culture, preparation of project report etc. They have to obtain right quantity and quality of seed, feed, fertilizers, etc. They should find out qualified personnel. Above all they should be aware about the cheap and reliable sources of finance also. Lack of knowledge about all these factors may be the reason which drag young people from the idea of starting aquaculture. The plans and projects of concerned authorities should be timely communicated to the farmers. This is possible through organizing training programmes. Therefore, the Department of Fisheries and its allied agencies are organizing a number of training programmes for attracting more and more people towards this field by rendering them necessary help in each and every stage of farming

Here an attempt is made to evaluate the effectiveness of Training programmes in the production of aquaculture products. The level of influence of training programmes on 15 activities connected with production for fresh and brackish water farmers is analysed and the result is shown in the form of mean.

Table 1

Effectiveness of training programmesin the application of production practices

Particulars	Type of Water body	N	Mean	T value	Significance
Participating training	Brackish water	210	4.7381	17.87	0.000
	Fresh water	140	3.4857		
Survey of pond	Brackish water	210	3.8714	4.512	0.000
	Fresh water	140	3.3000		
Type of culture	Brackish water	210	3.4190	5.838	0.000
	Fresh water	140	2.6857		

Project preparation	Brackish water	210	3.2190	3.952	0.000
	Fresh water	140	2.7643		
Pond preparation	Brackish water	210	3.2524	12.765	0.000
	Fresh water	140	1.9929		
Anti -weeding	Brackish water	210	3.2143	-7.613	0.000
	Fresh water	140	4.0000		
Supply of seeds	Brackish water	210	4.5095	21.907	0.000
	Fresh water	140	2.5357		
Supply of feeds	Brackish water	210	2.3476	21.992	0.000
	Fresh water	140	1.2071		
Supply of manure	Brackish water	210	1.9571	-.974	0.000
	Fresh water	140	2.0000		
Management of diseases	Brackish water	210	2.5238	-9.121	0.000
	Fresh water	140	3.4071		
Supply of finance	Brackish water	210	1.2810	3.017	0.000
	Fresh water	140	1.1500		
Periodic assessment	Brackish water	210	1.9810	-2.784	0.000
	Fresh water	140	2.1500		
Regulations for sustainable growth	Brackish water	210	3.0524	-1.650	0.000
	Fresh water	140	3.1786		
Fish farmers clubs	Brackish water	210	3.8857	.788	0.000
	Fresh water	140	3.8571		
Insurance coverage	Brackish water	210	2.1095	-2.381	0.000
	Fresh water	140	2.3286		

Source :Compiled through research

The table 1 shows that the training programmes are more effective in brackish water (higher Mean score value) than that of fresh water in motivating farmers to attend the training . Mean score value shows that in surveying pond, determining type of culture, preparing project report etc, training has more influence in brackish water. Training helps brackish water farmers to prepare the pond, for collection of seed, feed, fertilizer, finance etc to a level better than fresh water farmers. The brackish water farmers are more benefitted out of training programmes through the regulations. They check periodically the growth and mass of products. Training equips them in organizing fish farmers clubs and for getting their products insured.

In the activities connected with production like supply of manures, management of diseases, periodic assessment of growth etc ,the influence of training is more effective in fresh water (higher mean score value). The t values are satisfactory in all the cases and p values <0.05.

Effectiveness of Training Programmes in the application of harvesting and marketing practices

Just like production practices, scientific methods and techniques should be used for harvesting to improve the volume of output. Cropping or harvesting of fish pond is undertaken when the fish stock or part of it has attained market size. The market size is determined by customer acceptance or preference. Generally majority of fish species are harvested by 6 to 9 months. 75 to 100 kilograms of fish can be harvested from 500 square meter pond. It is better to advertise 3 or 5 days before harvest in identified markets. In order to reduce loss, steps should be taken to make maximum sales at farm itself. Fish should be sorted based on species or size. Before fixing price, the total cost and local prices should be considered. Proper records should be maintained for recording pond details, stock details, feed details, harvest details, credit information, sales details etc. The farmers have to select a suitable harvesting method which is economical in terms of output and quality. Effective handling is another area where maximum care should be given. There are chances of different type of losses in connection with defective handling. After sorting the products based on type, size, quality etc, steps should be taken for the preservation of products. Generally the farmers use icing and smoking for the preservation. Lack of transportation and preservation facilities and due to low demand, farmers may prepare value added products like fish pickles, dry fish etc. Utmost care should be given for the package of the product. In all these areas, improved practices are developed by extension agencies. They organize training programmes for imparting knowledge to farmers in all these aspects.

Here an attempt is made to see the effectiveness of these training programmes on the harvesting and marketing practices of the sample respondents. For this purpose, 14 harvesting and marketing practices are selected and the effectiveness of training practices on each and every practice is analysed in both fresh and brackish water and the result is shown in the form of mean and standard deviation.

Table 2

Effectiveness of Training Programmes in the application of Harvesting and Marketing practices

Harvesting and marketing practices	Type of water body	Mean	Standard Deviation	t value	Sig.
Preparation of harvest schedule	Brackish water	3.5667	1.28957	13.974	.000
	Fresh water	2.1714	053567		
Selection of method of harvesting	Brackish water	3.0714	1.12800	5.339	.000
	Fresh water	2.5000	.86914		
Preservation of products	Brackish water	2.3429	.61603	3.858	.000
	Fresh water	2.1429	.35118		
Preparation of value added products	Brackish water	1.4381	.60181	2.169	.031
	Fresh water	1.2857	.70237		

Canning and packing	Brackish water	3.1333	.99344	10.496	.000
	Fresh water	2.0214	.95562		
Determining prices	Brackish water	2.9429	.98144	2.249	.025
	Fresh water	3.1786	.94654		
Controlling middlemen	Brackish water	2.1429	.78781	2.969	.003
	Fresh water	2.4000	.80287		
Promoting export trade	Brackish water	3.6905	.66664	6.229	.000
	Fresh water	3.1786	.86721		
Organising demonstrations and exhibitions	Brackish water	4.0048	.75456	8.169	.000
	Fresh water	3.2929	.86079		
Selecting channels of distribution	Brackish water	2.2000	9.6741	4.620	.000
	Fresh water	1.6214	1.3753		
Providing transportation facility	Brackish water	1.5667	.63233	2.401	.017
	Fresh water	1.4214	.49556		
Providing cold storage facility	Brackish water	1.7048	.45724	3.126	.002
	Fresh water	1.5429	.49995		
Checking weight and quality of products	Brackish water	2.0000	.0000	11.798	.000
	Fresh water	1.6000	.49166		

Source: Compiled through research

The table 2 shows that training programme shave more influence in brackish water aquaculture in adoption of the practices like preparation of harvest schedule, selection of method of harvesting, preservation of products, preparation of value added products, canning and packing, promoting export trade, organizing demonstrations and exhibitions, selecting channels of distribution, providing cold storage facility, providing transportation facility and checking weight and quality of products (higher mean score). The p value shows that the variations in all the cases is significant also. The influence of training programmes is a little high in fresh water aquaculture (higher mean score) in practices like price determination and control of middlemen.

Conclusion

The main objective of the study titled A Study On The Effectiveness of Training Programmes in the Promotion of Inland Fisheries in Kerala is to find out the effectiveness of training programmes in the application of sustainable production and marketing practices in fresh water and brackish water resources. In order to assess the effectiveness of training programmes on the production practices, 15 production practices are listed. The primary data were collected from 150 freshwater farmers from district of Palaghat and 150 brackishwater farmers from district of Kollam randomly selected

using simple random sampling technique from the register of Matsyasamrudhi project of Department of Fisheries using a structured interview schedule. ANOVA is used for studying the level of influence of training programmes in the application of production and marketing practices both in fresh water and brackish water resources.

The study reveals that in production practices like in surveying pond, determining type of culture, preparing project report etc, training has more influence in brackish water. Training helps brackish water farmers to prepare the pond, for collection of seed, feed, fertilizer, finance etc to a level better than fresh water farmers. The brackish water farmers are more benefitted out of training programmes through the regulations. They check periodically the growth and mass of products. Training equips them in organizing fish farmers clubs and for getting their products insured.

14 harvesting and marketing practices are selected and the effectiveness of training practices on each and every practice is analysed in both fresh and brackish water and the result shows that training programmes have more influence in brackish water aquaculture in the adoption of practices like preparation of harvest schedule, selection of method of harvesting, preservation of products, preparation of value added products, canning and packing, promoting export trade, organizing demonstrations and exhibitions, selecting channels of distribution, providing cold storage facility, providing transportation facility and checking weight and quality of products. The influence of training programmes is a little high in fresh water aquaculture in practices like price determination and control of middlemen.

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