

# Socio-Economic Constraints in Adoption of Recommended Technologies for Composite Fish Culture in Rural India

## Abstract

The present study was conducted to assess the socio-economic constraints of composite fish culture among fish farmers in three districts of eastern Uttar Pradesh (Gorakhpur, Faizabad, Varanasi) during the year 2015-2016. Three blocks in each district were selected for the study; the blocks were selected on their high, medium and low fish production. In each block five to eight villages were selected randomly. By using a method of face to face direct interview, on presented questionnaire of constraints, the data was put to analysis. The result of this study are low price of fish, lack of technical knowledge, lack of facilities for soil and water testing, lack of inputs, undesirable fishes in the pond, lack of transportation facility were the major constraints associated with technological gap among the fish farmers. Majority of fish farmers suggested that easy availability of inputs, short term training programme at regular interval and long term loan for management of fish pond will overcome the constraints associated with technological gap among the fish farmers.

**Keywords:** Composite Fish Culture, Constraints, Technological Gap.

## Introduction

Use of modern inputs and adoption of technology in aquaculture are undoubtedly more important in increasing farm productivity (Murshad, 1972). This is true particularly in the developing country like India where prosperity of country is mainly depended on agriculture. Empirical evidence shows that the adoption of recommended farming technologies gives high production and income to the farmers, yet many of them are reluctant to accept those technologies due to some limitations like - Technical, Economic, Socio-psychological and Infrastructural. The extent of adoption of these recommended technologies by the fish farmers depends upon various factors as well as constraints faced by them. Constraints refers to the item of difficulties faced by fish farmers in the actual adoption of recommended technologies causing technological gap (Sen, 1987). It also plays an important role in adoption of recommended composite fish culture technologies.

## Aim of the Study

The present study has been designed with the following objectives-

1. To analyse and study the constraints associated with technological gap in composite fish culture among the fish farmers.
2. Suggestions of fish farmers to overcome the constraints associated with technological gap.

## Methodology

The present study was conducted in purposively selected three districts viz; Gorakhpur, Faizabad and Varanasi of eastern Uttar Pradesh. In each district three blocks were selected which are categorized as high, medium and low on the basis of fish production level. In each block five to eight villages were selected randomly which are used for data collection and survey. There are nine blocks and fifty four villages in which one hundred two fish farmers were interviewed for this study. The constraints faced by the respondents were measured by the open ended response technique. The responses of the respondents were measured in the form of 'Yes' or 'No' responses. The total numbers of frequency of the response were converted in percentage and then rank was used.



**Manoj Mishra**

HOD & Associate Professor,  
Deptt. of Economics,  
M.D.P.G. College,  
Pratapgarh, (U.P.)

**Findings And Discussion****Constraints Associated With Technological Gap Among The Fish Farmers**

The respondents were asked to report the constraints they face in adoption of recommended technologies causing technological gap in their fish farming (Steffens, 1992). During the time of investigation the respondents expressed variety of constraints which are grouped into following three categories and presented in Table 1, 2 and 3.

1. Technological
2. Information transfer
3. Socio-economic

**Table 1**  
**Technological Constraints ( n=102 )**

S. No.	Constraints	(n=102)	Percentage	Rank
1.	Lack of facility for soil and water testing	85	83.33	1 <sup>st</sup>
2.	Undesirable fishes in pond	72	70.58	2 <sup>nd</sup>
3.	Aquatic weed	63	61.76	3 <sup>rd</sup>
4.	Algal blooms	49	48.03	4 <sup>th</sup>
5.	Lack of assured water supply	40	39.21	5 <sup>th</sup>
6.	Non availability of good quality and quantity of fish seed	27	26.47	6 <sup>th</sup>
7.	Lack of balanced feed of fish (pellets)	10	9.80	8 <sup>th</sup>
8.	Disease of fish	12	11.76	7 <sup>th</sup>

**Table 2**  
**Information Transfer Constraints ( n=102 )**

S.No.	Constraints	(n = 102)	Percentage	Rank
1.	Lack of knowledge about information center.	80	78.43	2 <sup>nd</sup>
2.	Lack of technical knowledge	91	89.21	1 <sup>st</sup>
3.	Lack of technical guidance	33	32.35	3 <sup>rd</sup>

**Table 3**  
**Socio-Economic Constraints ( n =102)**

S. No	Constraints	(n=102)	Percentage	Rank
1.	Lack of inputs	79	77.45	2 <sup>nd</sup>
2.	Low price of fish	102	100	1 <sup>st</sup>
3.	Lack of fish insurance	36	35.29	4 <sup>th</sup>
4.	Lack of transport facility	63	61.76	3 <sup>rd</sup>
5.	Fish poaching	18	17.64	5 <sup>th</sup>

The data presented in Tables (1, 2, 3, )show that among technological constraints, "Lack of facilities for soil and water testing" and "Undesirable fishes in the pond" were perceived main technological constraints by 83.33 and 73.83 percent of the fish farmers respectively. While 91.67 percent of fish farmers reports that "Lack of technical knowledge" was major constraints in information transfer. As regards socio-economic constraints "Low price of fish"

and "Lack of inputs" were major constraints reported by 100 and 75 percent of fish farmers respectively. This might be due to low educational level, poor economic conditions, unawareness about improved package of practices and use of traditional (Extensive) fish farming by the fish farmers (Thomas, 1987; Saharan et al.1992).

**Suggestion to Overcome The Constraints**

Respondents were asked to suggest possible solution as they perceived to overcome the constraints associated with technological gap among them. The data in this respect are presented in Table 4.

**Table 4**  
**Suggestion to Overcome Constraints as Perceived by the Fish Farmers (n=102)**

S. No	Suggestions	( n = 102)	Percentage	Rank
1.	Technical knowledge about composite fish culture should be provided	74	72.54	5 <sup>th</sup>
2.	Easy availability of inputs should be provided	96	94.11	1 <sup>st</sup>
3.	Easy way of fish insurance should be provided	79	77.45	4 <sup>th</sup>
4.	Long term loan for management of fish pond should be provided	86	84.31	3 <sup>rd</sup>
5.	Short term training programs at regular interval should be arranged	92	90.19	2 <sup>nd</sup>
6.	Time to time technical guidance for fish farming should be arranged	69	67.64	6 <sup>th</sup>
7.	Arrangement of fish market for getting high price	68	66.66	7 <sup>th</sup>
8.	Arrangement of fish feed in the form of pellets in which all protein, vitamins, fats and minerals are present in sufficient amount (Balanced feed).	62	60.78	8 <sup>th</sup>

It is clear that the data presented in Table- 4, that more than 90 percent of fish farmers had suggested arrangement for "easy availability of inputs" and "short term training programs at regular intervals" while "long term loan for management of fish pond" and "insurance facility" were suggested by 84.31 and 77.45 per cent of fish farmers respectively.

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