

Research Note

Correlates of Pisciculture Technology Adoption in Jagatsinghpur District of Odisha

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ABSTRACT

According to the Food and Agriculture Organization (FAO), fish output in India doubled between 1990 and 2010. Fisheries sector is a source of livelihood for people engaged in fully, partially or in subsidiary activities. It's an integral component of rural development programme and its requirement of capital investment is relatively low and short gestation period. Per hectare annual income from pisciculture is much higher than that of crop production and pisciculture may appear to be a viable proposition for small and marginal farmers. The youth entrepreneur can generate more income from a small area of land by pisciculture in comparison to other crops. Odisha ranks 10th in terms of production of fish and it produces almost 4.50 percent of the total fish production of the country. The present study conducted in Ersama, Naugaon and Tirtol blocks of Jagatsinghpur district on 110 (hundred ten) number of respondents. More than three-fourth of the respondents (73.63%) had medium level of adoption, whereas only 15.45 per cent of the respondents had high adoption. Pisciculture technology adoption was found negative and non-significant with their age and innovation proneness and found positive and significant with their education, mass media exposure, socio-economic status, annual income and risk orientation.

Keywords: Adoption, Change proneness, Pisciculture

INTRODUCTION

Fishing in India is a major industry in its coastal states, employing over 14 million people. Pisciculture in India has increased more than tenfold since its independence in 1947. Odisha is one of the major maritime States, offering vast scope for development of inland, brackish water and marine fisheries. The State's 480 km long coastline with 24,000 sq. km area within the continental shelf has ample potential for marine fisheries development. Freshwater resources of the State are estimated to be 6.76 lakh ha comprising 1.25 lakh ha of tanks/ponds, 2 lakh ha of reservoirs, 1.80 lakh ha of lakes, swamps and jheels and 1.71 lakh hectares of rivers and canals. The State ranks 10th in terms of production of fish and produced 4.50 per cent of the total fish production

in the country during 2014-15. As per India's Census 2011, Youth (15-24 years) in India constitutes one-fifth (19.1%) of total population. India is expected to have 34.33 per cent share of youth in total population by 2020. The share reached its maximum of 35.11 per cent in the year 2010. The youth entrepreneur can generate more income from a small area of land by pisciculture in comparison to other crops hence, pisciculture may appear to be a viable proposition for small and marginal farmers. Small scale pisciculture entrepreneurship can help to reduce hunger and poverty (Mishra, 2008). Fishing, which is almost everywhere an open access or free resource, may also serve as an occupation of last resort for landless and impoverished rural youth populations. Where pisciculture is concentrated and intensive, it plays an economic catalyst role, through activities that build up

around the fishing community. As such it is needed to find out the adoption status of scientific pisciculture technology.

METHODOLOGY

The study was conducted in Ersama, Naugaon and Tirtol blocks of Jagatsinghpur district. Both purposive and multistage random sampling methods were adopted for selection of the district, block, gram panchayat, village and respondents. A list of pisciculture farmers of these selected villages was obtained from the Assistant fisheries office, from the list proportionate stratified random sampling method was followed to select respondents of the study. A total of 110 (hundred ten) number of respondents were selected for the purpose of the investigation. The response was obtained from each individual respondent in a structured interview schedule which was pretested with 10 per cent samples other than the respondents of the study. The success of pisciculture depends upon adoption of basic principles of weeding, fertilizer application, liming, periodical examination, etc. Hence, it was felt necessary to know that up to what extent the pisciculture farmers had adopted pisciculture technology. To measure the level of adoption of pisciculture, adoption quotient for each individual respondent was calculated. Based on the adoption quotient respondents were categorized in to three groups, as low (Below mean - standard deviation), medium (Mean $\pm$ standard deviation) and high extent of adoption (Above mean + standard deviation).

RESULT AND DISCUSSION

The categorization depicted in Table 1 indicates that more than three-fourth of the respondents (73.63 per cent) had medium level of adoption, whereas only 15.45 per cent of the respondents had high and remaining 10.92 per cent of them had low level of adoption.

The data presented in Table 2 reflect that level of adoption of pisciculture farmers was found non-significant with their age. This indicated that age of the pisciculture farmers did not play any role in improving their level of adoption of selected technology of pisciculture farming. This finding is similar to the finding reported by Solanki

Table 1: Distribution of respondents according to their level of adoption of Pisciculture technology

Adoption Level	Pisciculture Farmer	
	Freq- uency	Percen- tage
Low score (score below 48.66)	12	10.92
Medium score (score from 48.66 to 79.34)	81	73.63
High score (score above 79.34)	17	15.45
Total	110	100

Table 2: Relationship between socio personal characteristics of pisciculture farmers and their level of adoption

Variable	Correlation Coefficient (r= value)
Age	0.0315 ^{NS}
Education	0.276*
Mass media exposure	0.274*
Socio-economic status	0.328*
Annual income	0.519*
Risk orientation	0.191
Innovation proneness	-0.004 ^{NS}

*Significant at 0.05 level of probability; NS = Non significant

(1990). The education of the pisciculture farmers was found significant and positively associated with extent of adoption of the pisciculture farming. It meant that education of the pisciculture farmers plays vital role in improving their level of adoption of pisciculture farming technology. This finding is in partially agreement with the findings of Haque and Ray (1983); Balasubramaniam and Kaul (1985) and Solanki (1990). Further mass media exposure of the pisciculture farmers was also found significantly and positively related with extent of adoption of the pisciculture farmers. It meant that mass media exposure of the pisciculture farmers plays important any role in improving their level of adoption of modern practices of pisciculture farming. Socio-economic status of the pisciculture farmers had positive and significant relationship with extent of adoption of the pisciculture farming. It can be attributed to the fact that the person who has better socio-economic status can afford the cost-intensive inputs of pisciculture, comes forward to adopt the technology on a complete basis. This finding is similar to the finding reported by Nath (1993).

Annual income of the pisciculture farmers had positive and significant relationship with level of adoption of the pisciculture farming. It meant that higher the level of annual income of fish farmers; higher would be their extent of adoption of pisciculture technology. It may be due to the fact that the farmers get direct experience of the profit obtained from pisciculture. So he becomes more interested in taking up the technology to a greater extent. The risk orientation had significant relationship with the extent of adoption of fish farmers. Risk orientation is expressed as the degree to which farmer is oriented to take risk and has courage to face uncertainties in adoption of improved technology. Such type of orientation comes as a result of good education, economic condition and positivism in many other psychological variables among the farmers. In this study, majority of the pisciculture farmers did have such type of positivism. Therefore, above result was observed. The above result is in line with the finding reported by Solanki (1990). The innovation proneness of the fish farmers had negative and non-significant relationship with level of adoption of the fish farming. It meant that innovation proneness of the fish farmers did not play any role in improving their extent of adoption of pisciculture. It can also be said that pisciculture farmers involved in pisciculture have not get expected degree of interest in getting useful information regarding new technology of pisciculture. Therefore, innovation

proneness did not play any positive role in improving their level of adoption. The above finding is opposite to the finding reported by Patel and Sangle (1993).

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