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An economic analysis of composite fish culture ponds in Sundergarh district, Orissa

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ABSTRACT

Productivity in fresh water aquaculture depends on the extent of inputs like fingerlings, feed, fertilizer, labour and management. The physical inputs need to be applied in right quantity at the right time. The Indian Major Carps (IMC) are cultured in ponds ranging in size from 0.4 to 1.0 ha. The management of ponds depends upon the financial capacity and knowledge of the farmer in aquaculture principles. The present study was carried out to study the cost of inputs, production and earnings in four ponds with different managerial practices in Sundergargh district, Orrisa. The operational costs and returns varied among the ponds. More than 50% of the operational cost accounted towards the expenditure of feed. The variations observed in the production and returns have been discussed in relation to the inputs and managerial practices employed. The production for 0.4 ha area was comparatively low than 1ha pond area.

Key words : Composite fish culture, Carps, Costs and Return

In India, fish production has increased due to several developmental programmes of Govt. in different states. Increased fish production in village tanks and ponds is possible through scientific farming which will help to improve the socio-economic conditions of the rural population by providing them employment opportunities in aquaculture. Proper utilization of ponds and tanks with the application of various inputs would increase aquaculture production manifolds. Productivity in aquaculture depends on the extent of use of inputs like seed, fertilizer, feed, labour and management. As feed, fertilizer and seed assume a major share of the variable costs, the label of their application is suboptimal. A study of the level of input application and its possible effects on yield will be of great help to draw policy implications towards increasing fresh water fish production. In the context of accelerated expansion of fish culture activities, it becomes necessary to have an in depth study of the enterprise to achieve sustained growth. Hence, the present study of economic analysis of composite fish culture was carried out in Balishanker block of Sundergarh district of Orissa to asses the profitability of the enterprise.

MATERIALS AND METHODS

Sundergarh, a non-maritime district of Orissa, has 17 revenue blocks of which Balishankar block was purposely selected for the study where there is a steady demand for fresh water fish and fresh water fish culture is popular and lucrative. Four ponds in Balishanker block were selected during the year 2009 and the extent of pond 1, pond 2, pond 3 and pond 4 was 0.4, 0.4, 1.0 and 1.0 ha, respectively. In these ponds, the culture period was twelve months. Information on input wise and operation wise costs and returns was collected from the farmers of the respective ponds using a pre-tested interview scheduled. The data thus collected were processed, tabulated and analyzed and the results were presented accordingly.

RESULTS AND DISCUSSION

The data on the operational costs under major items such as preparation of tanks using lime, cost of seed, cost of fertilizer, feed and miscellaneous items (ploughing of the land, watch and ward, medicine and harvesting) of the four ponds were computed for one hectare per year which are presented in Table 1. There was not much variation in the pattern of fixed cost. The major fixed costs items were towards rent for the leased in tank or rental value of own tank which has been fixed as rupees 2500 for 1 ha area of pond. This accounted for 5.80%, 5.62%, 6.35% and 6.16% of total cost of production for pond 1, 2, 3 and 4, respectively and the difference was not found significant ($P > 0.05$). The cost of production per ha was Rs. 43125, Rs. 44505, Rs. 39390 and Rs. 40585 for pond 1, 2, 3, and 4, respectively. From the study it was observed that more than 50% of the operational cost was spent by the farmers towards provision of feed. The cost of seed was second highest

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