ECONOMICS OF AQUACULTURE

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INTRODUCTION

Importance of Fish culture

There is an old proverb – “Give a man a fish and you feed him for a day, teach him how to fish and you feed him for a lifetime”. But this proverb does not hold true in the present situation. As human population increases and natural fisheries resources diminish, knowing how to fish is not enough for today’s fishers and their families. In the present dynamic economic situations, fishermen would be better off by learning how to grow fish or trying another trade altogether. Global fish supply is becoming increasingly scarce and more subject to human influences. The transition to relative scarcity cannot be prevented by more intensive fishing but rather will be ameliorated by better management of fisheries resources and improved aquaculture production.

It is a well known fact that fish farming has edge over crop production since it can be conducted on land that is not suited for crop production. It can flourish on land whose waters are mostly saline. Further, as fish live in a fluid medium and are cold blooded, they require minimal metabolic energy for maintenance of body temperature and for normal locomotion compared with land animals. Hence, it may be said that they are the most efficient converters of food. When various vertebrates are properly fed balanced diets under favourable environmental conditions, the conversion rates of dry feed to wet weight gain are as follow: fish about less than 1.5; cattle about 10.0 to 1.0, hogs, 4.0 to 1.0 and poultry 2.5 to 1.0 (Ronsivali, 1976). Fish also use space more efficiently than many land animals because they are three dimensional habitants. In well managed environments, 3000 kg or more of fish can be produced per hectare per year, contrasting the maximum figure for cattle is 500 to 700 kg (Bell and Canterbery, 1976).

In addition a desired amount and quality of fish can be made available to consumers through fish culture. Fish farmers can also control production and market their stock when natural supplies are either seasonally low or unavailable for other reasons. Moreover, aquaculture offers the possibility for species improvement by selective breeding to meet consumer’s tastes and market’s requirements.

Aquaculture can also become a major income generating component in our Integrated Rural Development Programmes. It can be practised as supplementary enterprise to crop production and animal husbandry for generating employment and income to improve the quality of life of poor section of rural society. Further, culturing exportable species of fish would contribute to foreign exchange earnings. All of these directly or indirectly may help improving nutrition and employment, and consequently an increase in income on rural households.

India is the seventh largest producer of fish in the world and second in inland fish production. Fishery sector plays a vital role in sustaining a fairly large proportion of population particularly along the 8129 kms of coast line. The contribution of fisheries to the net domestic products has increased from Rs. 921 crore in 1984-85 to Rs. 10700 crore in 1998-99 at current price, showing about eleven and half fold increase during almost two decades. During the period, the share of fishery increased from 0.75 per cent to about 1 per cent of National Gross Domestic product. It has immense potential for export since the export of fish and fish preparation increased from Rs. 5 crore in 1960-61 to Rs. 5114 crore in 1999-2000 which accounted for 1.76 per cent and 2.08 per cent of total agricultural exports of the country, respectively. The quantum of fish export also increased from 19.9 thousand tonnes in the year 1960-61 to 390.6 thousand tonnes in the year 1999-2000 which accounted for 1.72 per cent and 6.90 per cent respectively of total fish production in the country (Appendix I and Figure-1).