FISH PROCESSING INDUSTRY IN INDIA

- A Retrospect, Present Status and Future Prospects

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ABSTRACT

The fishing and fish processing industries of India have made rapid strides in the last two decades, boosting up the rank and prestige of the country among the maritime nations of the world. Though this is a commendable achievement over the primitive and out-moded conditions of the industry prevailing prior to this period of renaissance, it leaves no room for complacency as much more remains to be achieved in this field. More than 90% of our export earnings from marine products are derived from a single variety viz, prawn, which constitutes only 10-12% of our total marine fish landings and consequently all important activities are centred round this commodity. An all round diversification in harvesting, processing and marketing, side by side with modernisation of our traditional fish curing industry and proper and economic utilization of the by-products of the industry alone can effect any substantial improvement in the future performance of the industry.

Introduction

The fish processing industry of India, as we envisage it today, has got hardly two decades of standing. Though faced with a multitude of problems, financial, technical and otherwise, the industry today presents a rosy picture which we can feel proud of. Over 10,000 mechanised boats of various size ranges are operating all along our coast line, besides lakhs of country crafts, raising our annual total fish production to about two million metric tonnes, which includes the catch from inland water sources as well, lifting our country to the sixth rank among the fish producing nations of the world. We have today over fifty each of freezing and canning factories with installed capacities of over 400 tonnes of frozen fish and over 6,00,00 tins of canned fish respectively per day, with over 300 exporting organisations dealing with these commodities, earning nearly 80 crores of rupees worth of foreign exchange in the year 1973. Occupying a unit digit rank among the foreign exchange earners of the country, this industry provides livelihood for the several lakhs of people engaged directly or indirectly in it.

Retrospect

If we cast a glance backwards, we can see that the conditions were entirely different about two decades back. Mechanised fishing and scientific methods of handling and preservation of fish were practically unknown in our country before the second world war. Lots of fish used to go waste in glut seasons, as manure. Dry prawn pulp, salted dried and pickled fish and dried shark fins and fish maws used to be our main export commodities which had a lucrative market in our neighbouring countries like Sri Lanka, Burma, Malaya, Singapore and Hongkong, fetching a few millions of rupees worth of foreign exchange every year. Immediately after the war, some of the above countries attained their independence along with us and they banned imports of the above commodities with a view to encouraging internal production and conserving their financial resources, throwing our fishing and fish processing industries into a state of utter despair.

Present Status

The first sign of redemption from this near collapse came with the export of a mere 13.3 metric tonnes of frozen prawns worth Rs. 57,700/- in the year 1953. This picked up momentum year after year until the record figure of 35,895 metric tonnes worth Rs. 65.8 crores was exported in the year 1972. Canned prawns followed in 1959, frozen froglegs in 1960 and frozen lobster tails in 1962, all of which also progressed rapidly until our total exports reached 48,785 metric tonnes worth Rs. 79.58 crores in 1973. This sparked off a chain reaction in the process of establishment of mechanised fishing and processing factories and their ancillaries, resulting in a thorough change over of our marine products industry to the one we have today. The factors and agencies which contributed to this marvellous achievement have been enumerated by the author in an earlier communication[1]. The year to year progress achieved in the production and export of these commodities can be easily understood from figures I and II.

Fig: I

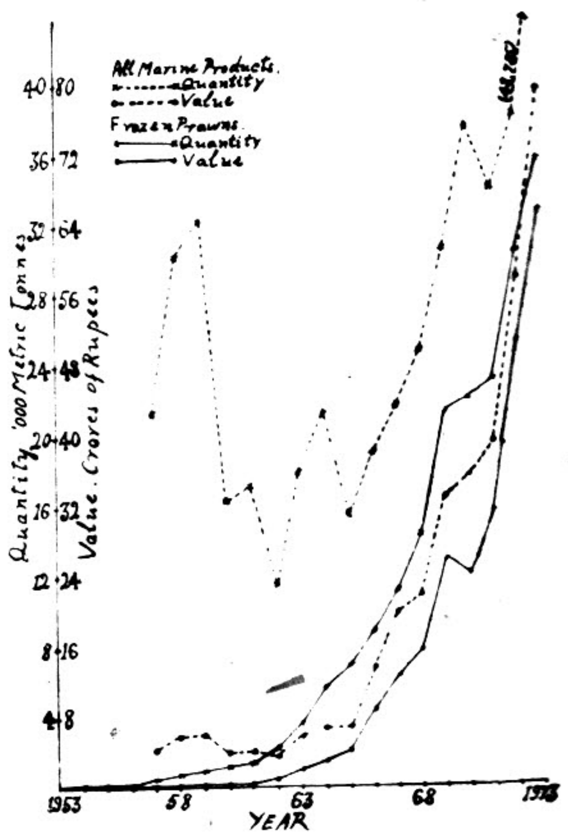

Fig. I. Export of all marine products together (since 1957) and frozen prawns (since 1953) from India.

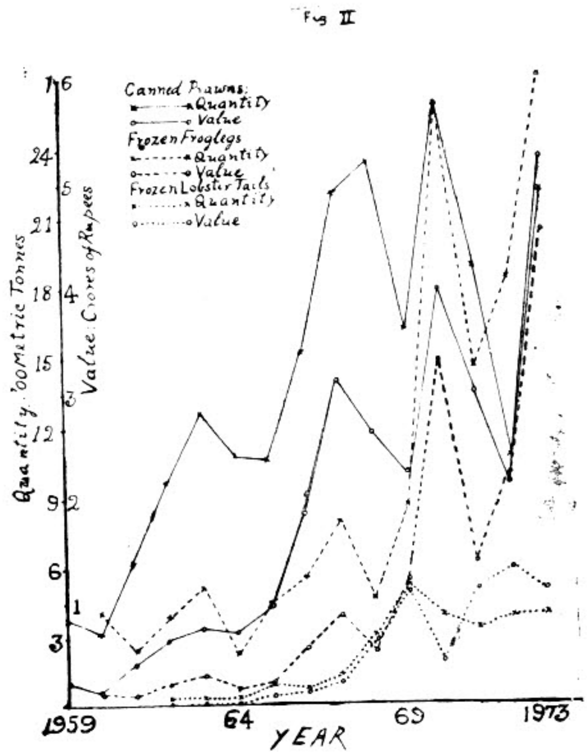

Fig. II. Export of canned prawns, frozen froglegs and frozen lobster tails from India since their respective years of commencement upto 1973.

Two facts become conspicuous from figure I ie. even though the total quantities of marine products exported from the country shows some fluctuations, the value realised shows a steady increase and the curve representing the value of frozen prawns lies closely parallel to that of the total value realised, showing the high position occupied by this commodity among the export items. Figure II indicates a general upward trend both in the quantities exported and values realised with regard to the three items viz, canned prawns, frozen froglegs and frozen lobster tails.

One point of concern that emerges out of these figures is that while prawn products viz. frozen, canned and dried together constituted 65% of the export earnings from marine products in 1963, the corresponding figure for 1973 is 90%. The figure was still higher during 1972 (91.4%), while in 1964 it was only 69.2%. The average for the years 1965–71 was 84.8%. This shows an over-dependence by our industry on a single variety viz, prawn which constitutes hardly 10–12% of our total marine fish landings. All our mechanised fishing, processing and export activities are centred round this commodity, which is not very healthy as far as our fishery industry is concerned. In the course of this blind-folded race for specialization, our traditional fishery products viz, dried fish, dry prawn pulp, shark fins and fish maws which once constituted the backbone of our fishery industry, have been neglected as can be found from figure III. Both the

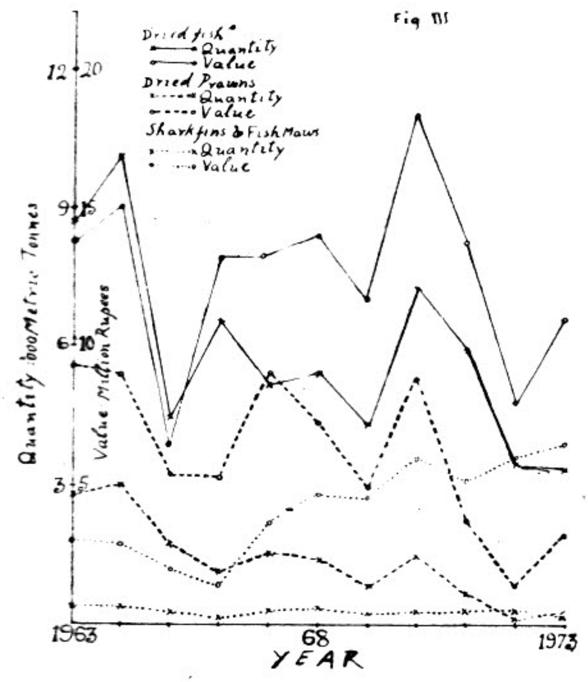

Fig. III. Export of dried fish, dried prawns, dried shark fins and fish maws from India in the decade 1963–'73.

quantities exported and costs realised from these products record a continuous decline, but for a hump in the year 1970.

Future Prospects

The future of our fishery industry will be rather gloomy if this tendency for specialization in one variety is not checked. What is immediately called for is a programme of diversification, which must be made the watch-word for all future developments in our fishery industry. Diversification should be introduced at all stages viz, harvesting, processing and marketing. Our mechanised fishing fleet must be partially diverted for capturing valuable pelagic fishes like sardine, mackerel, Bombay duck, tuna, seer, pomfret, shark etc. Alternatively, they should be equipped with gears to harvest these fishes at least during seasons when prawns are not available, rather than keeping them idle during such periods. Off-shore and deep sea fishing also have to be simultaneously developed. This is almost entirely neglected at present. Rich proven grounds for sand lobsters, deep water prawns and valuable pelagic species like tuna, seer etc. exist around our country, which are now being exploited by other more enterprising nations, from the international waters in our neighbourhood.

There is plenty of scope for diversification in our processing industry also. The technical know-how developed indigenously for this purpose has been reviewed by the author recently.[2] Our freezing industry now limits its activities to prawns, froglegs and lobster tails which alone earn foreign exchange at present, leaving more than 60% of its installed capacity idle, which could advantageously be utilized for preservation of our other important food fishes for internal consumption as well as for export markets which could be developed in due course. Researches already carried out in the country towards achieving this end have been exhaustively dealt with by the author in a recent review.[3] The extent of one-sided development being pursued by our freezing industry is amply illustrated by the fact that even though individually quick frozen (IQF) prawns fetch a much better price in the external markets, our industry has not yet been able to adopt this technique.

Canning

The fate of the canning industry is also not much different from that of the above. A major fraction of the installed capacity goes idle in this case also due to over-dependence on prawn. Of course, small quantities of oil sardine, mackerel and tuna are being canned mostly for supply to defence establishments and partly for the internal civilian market. Technical know-how worked out in the country for preservation of our important food fishes by canning has been reviewed by the author[4]. Even though about 30% of our total marine fish landings is constituted of oil sardines and though highly potential foreign market exists for it in the canned form, the tragedy has been that we have not been able to compete in the international market for this commodity due to the high cost of production contributed by the tin container and the filling medium viz, edible vegetable oil. Some sort of incentives or adoption of a sales technique similar to that employed for our sugar in foreign markets is sure to go a long way in establishing an economically viable canning industry based on oil sardines.

Marketing

Regarding marketing of the sophistically processed frozen and canned products also we have hitherto been following a dangerous policy of over-dependence on selected foreign markets. For example, the main avenues for our frozen prawns and froglegs have been U. S. A. and Japan, the vagaries of which have been adversely affecting our industry on several occasions. Exploration and establishment of alternative markets for these products are essential for the healthy development of the industry. A solution will have to be found for providing the necessary infrastructure for this, like shipping facilities.

Fish Curing

Coming to our traditional salted and dried fish and dry prawn pulp industry, the latter has been fast dwindling due to diversion of the raw material for the freezing and canning industries. The former one is in a thoroughly neglected state, even though a major portion of our fish catches is still preserved by this method. Being the easiest and cheapest method and hence falling within the economic reach of the vast masses of the population, this method of preservation of fish is bound to remain in vogue in all developing countries for a long time to come. There is vast scope for reorganising the industry on modern lines as indicated in some earlier communications by the author[5, 6], in the event of which we can even command a foreign market for such products besides combating the protein deficiency in our country to a large extent. The dry prawn pulp industry also, though in the waning phase, can be modernised to the extent it is being applied so as to get better returns.

Byproducts

Proper economic utilization of the byproducts like prawn heads and shells, fish offals, fish body oils like sardine oil, guano and the cheaper varieties of miscellaneous fishes, usually termed " trash fishes " is a " must " for the prosperity of the industry. Methods worked out indigenously for this have been covered by the author under reference (2) cited above. Protein concentrate and chitosan from prawn wastes, fish meal and manure from offals and guano, industrial products like printing ink base, factice, lubricating oil etc. from sardine oil, fish protein concentrate (FPC for human consumption), bacterial peptone and hydrolysed protein products from trash fishes are but some of the prospective products in this field. Further detailed researches on economic utilization of trash fishes are being carried out under an All India Coordinated Research Project sponsored by the Indian Council of Agricultural Research.

Transportation

Considerable amounts of fish are consumed in the fresh condition in and around the landing centres. Being a vast country with potential fish consuming centres lying thousands of kilometers interior, there is vast scope for transporting fresh fish scientifically and hygienically from the landing centres distributed throughout the coast line to the internal towns and cities. Development of economic and efficient containers and modes of handling and transportation form the subject matter for another All India Coordinated Research Project initiated by the above Council.

Conclusion

In conclusion we may say that even though our fish processing industry has made rapid strides in recent years, it leaves no room for complacency, as, much more remains to be achieved. Rapid development of deep sea fishing, diversification of harvests, processing methods and markets, provision of ancillaries like more fishing harbours and ice plants, fuller utilization of the installed capacities of the existing processing plants, economic utilization of byproducts and trash fishes, reorganization of our fish curing industry on modern scientific lines and employment of quick and efficient methods for transportation of fresh fish to the interior places of the country are the immediate requirements to be fulfilled.

References

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2 ...., Proceedings of the Symposium on Living Resources of the Sea Around India, 1968, pp. 725-736, C.M.F.R.I., Cochin.

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4 ...., Ibid, 25.

5 ...., Seafood Exporter, 1967 *1 (8 & 9)*, 19.

6 ...., Indian Food Packer, 1969, XXIII (1), 33.