

A Recend Trends in Prawn Culture Industry

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Introduction

Prawn culture industry - riddled with low international prices and unilateralism of export syndicates - has sought the intervention of the government to provide a remunerative environment for its continued sustenance. In the wake of abysmal fall in international market price for shrimps, Tamil Nadu Coastal Aquaculture Farmers Federation (TANCAFF) under the aegis of Prawn Farmers Federation of India (PFFI) met here recently to place a charter of demands that would help remedy the export environment and create a domestic market. International market price was around Rs.450 per kilogram in the nineties, but it has been slashed by half today. However, input costs, including seeds (prawn seeds), feed, tilling and ploughing, and labour has hiked manifold, rendering the process unviable without adequate government support.

Absence of market intelligence has placed aquaculture at the mercy of export syndicates. The price offered by syndicates hovered around Rs.200-Rs.225 per kilogram, which was lower than the cost of production of Rs.250 per kilogram. The lapse was on the part of MPEDA (Marine Products Export Development Authority), which was the nodal agency for aquaculture and also that of the National Fisheries Development Board (NFDB), say federations. The international market price was available in the open domain. MPEDA would just have to collate that information and put it up for prawn federations at least on a weekly basis, so that the Indian produce is not undervalued. Such critical market intelligence would insulate prawn culture from eventual crisis. Lack of vision on the part of MPEDA and NFDB has affected aqua culture at large, say federations.

The prawn produce was being exported as a commodity without value addition at a low price. While, Japan picks it up and re-exports it as value added product. MPEDA should step in for value addition, and provide the necessary impetus for higher exports. These countries enjoy the lobbying support from their respective governments in fetching in higher export price. He also sees it as a 'marketing failure' on the part of the MPEDA.

Prawns can be sold fresh (chilled) if they are going to be consumed within 5 (preferably 3) days. Prawns, which are not expected to be sold within 3 days, should immediately be frozen. Freezing should take place when they are fresh, not after they have been on ice for several days. Frozen tails have a longer shelf life than whole prawns. Whole frozen freshwater prawns will turn 'mushy' if they are frozen and held above -20°C, or if they are thawed and refrozen. It is

recommended that prawns to be stored for long periods be held at -30 to -35°C . Tails which are frozen in ice blocks may be stored for over a year and still be very satisfactory, although a maximum of six months is recommended. Glazing or vacuum packing significantly prolongs the useful life of frozen prawns. While vacuum packing requires elaborate processing facilities, not available to small farms, glazing is quite simple: a very thin mixture of syrup and water prevents oxidation.

MARKETING

Production goals and harvesting practices should be developed in response to marketing strategies. Without this approach, financial loss due to lack of adequate storage (holding) facilities or price variability is inevitable. Market demand suggests that large, live, and iced with heads on products have a lucrative but small niche. Other production will have to enter and be competitive within the shrimp commodity market. Year-round distribution of this seasonal product will require freezing and an individually quick frozen (IQF) product, both whole and headless, is an attractive form for the consumer. Block frozen is also an alternative method of processing for long-term distribution. Recent studies show that whole prawns, harvested two to four hours prior to exposure to the IQF process, have a shelf life of at least one year. Thawing of the frozen product for use in cooking can be completed with cold water immersion for immediate use or under refrigerated conditions, within a four to eight hour period, for later use.

Marketing prawns alive will usually generate a better price for you but, of course, increases your costs. Marketing them successfully in this way depends on your ability to keep them alive during transport and display, and to present undamaged, healthy prawns in an attractive way. Good survival of adult freshwater prawns can be achieved during journeys of up to at least 24 hours at a density of 600 g/L with good aeration, without any visible deterioration in their quality. It is best to transport the prawns on shelves stacked vertically within the water column; this helps to avoid mortalities caused by crowding, as well as maintaining better localised water quality. Cool transport ($20-22^{\circ}\text{C}$) minimizes water quality problems and reduces the activity of the prawns, thus lessening the likelihood that there will be injuries due to combat. The use of hard water tends to stabilize the pH, thus reducing the toxicity of any ammonia that builds up during transport.

Once the prawns arrive at the point of sale (e.g. restaurant, market) they can be maintained fairly densely packed in aquariums with a good biofilter. In some places, specialist firms collect live prawns from various farms, using small pickups with tanks and aeration devices. They may also buy, at a lower price, fresh (chilled) prawns. Another alternative is for you to join with other farmers to form a cooperative for this purpose. The key to success is to adapt to the needs of the local market in order to secure the highest income. In some places, small prawns can be sold as bait to fishermen; in others there is a recreational fee fishing (angling) market for live prawns themselves. In yet others there is an opportunity to sell live animals for home aquaria and for instructional use in schools. Caution must be used in areas

where Macro brachium Rosenberger is not indigenous, however, to ensure that they do not escape and endanger local fauna.

To tide over the problems encountered in the marketing of tiger shrimp, some farmers in Tamil Nadu, Andhra Pradesh and Gujarat have initiated the culture of Indian white shrimp *F. indicus* as it has a good demand in the domestic market. In order to assess emerging culture practices of this species, which was once cultivated extensively in India, information was collected from hatchery operators who supplied white shrimp seed and six farmers, (Gujarat-1; Tamil Nadu-5). It was observed that the farm size was generally 1- 3 ha and the production was 0.93-2.8 t/ha and FCR obtained was 1: 1.1-1.8. It was also observed that in the case of white shrimp, two to three crops (75-100 days) were possible while only one or two crops of 4- 5 month duration are possible with tiger shrimp. A farmer in Gujarat who reported a profit margin of about 50 % carried out a partial harvesting after 70 days of culture, so as to cater to the domestic market demand which was about 300 kg/day in the week days and 500 kg on Sundays. The shrimps were sold @ Rs.150-170/kg in Tamil Nadu and Rs.200/kg in Mumbai. A progressive farmer in Pattukottai, Tamil Nadu cultured and supplied the white shrimp to domestic markets in Bangalore, Goa and in Tamil Nadu during closed fishing seasons to realize a higher profit. Though no disease problems were reported in Gujarat, WSSV, LSS, *Vibrio* spp and Slow Growth Syndrome were reported from one farm at Tamil Nadu. From the observations made in this study, it could be inferred that, further spread of *F.indicus* culture would depend on the ability of farmers to exploit the domestic market.

conclusion

Marketing prawns alive will usually generate a better price but, it also increases handling costs. Marketing them successfully in this way depends on the ability to keep them alive during transport and display, and to present undamaged, healthy prawns in an attractive way.

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