



### ICAR, Ciba Initiative on Multifocation Demonstration of *F.indicus*

- Excellent growth potential of 25 g ABW in 120 days of culture on par with other commercial penaeid species
- Density dependent growth pattern is observed
- Production of 3-5 tons/ha was achieved at a moderate stocking density of 25-40 nos/sqm with 90% survival.
- A FCR of 1.2-1.5 was achieved with CIBA feed (Protein starter-36% grower-34%)
- Easy to domesticate and breed
- Genetic divergence between different stocks from Indian coast was established.
- Various eco-based culture techniques for high density culture have been evaluated.
- Has similar market rate as other penaeid shrimp including Pacific white shrimp *L. vannamei*.

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Upgradation of Breeding and Culture Technology  
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through Stock Evaluation and Culture Demonstrations

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## INDIAN WHITE SHRIMP CULTURE DEMONSTRATION

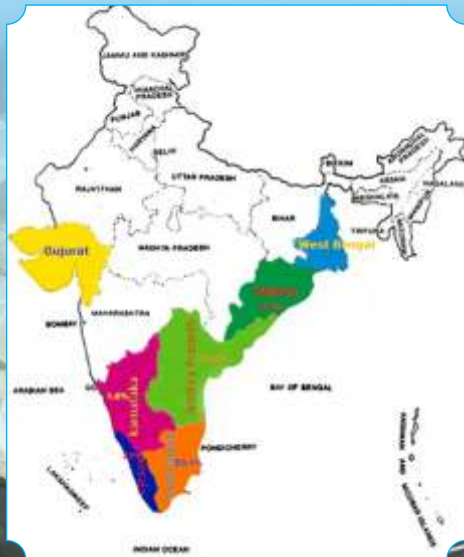


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## Back ground

Shrimp culture plays crucial role in socio-economic and nutritional security of coastal community, and form a major share in seafood export earnings of the country. Being a lucrative profession, shrimp culture attracts many progressive farmers to venture commercial scale culture. However, viral disease outbreaks like WSSV in black tiger shrimp, *P.monodon* leads to shattering of shrimp culture in India. This made the shrimp farmers to seriously taking up a new exotic SPF alternative species, *Litopenaeus vannamei* (Pacific white shrimp) for commercial culture. However, rampant culture of *L. vannamei* in many parts of India without proper scientific management practices resulted in outbreak of many emerging diseases like running mortality syndrome, EMS, EHP, slow growth syndrome over the sustainability of Indian shrimp industry.



The Indian white shrimp, endemic to Indian coast is one of the best species that has undergone standardization of breeding and seed production. In late 1980s *P.indicus* shrimp hatcheries were established by ICAR with an initiative to take up scientific shrimp culture. In the present scenario of disease outbreaks and emerging diseases, it is high time to explore genetic emphasis on this native species to develop genetic improvement programme through selective breeding. Moreover, stock difference in this species along Indian coast indicates its genetic variability that could be exploited to improve this species.



To achieve this target, it is highly imperative to test the different stocks at different location to evaluate the potential of this species. The popularization of *P.indicus* with an aim to achieve 3-6 ton per ha has initiated under NFDB to demonstrate its potential among different



geographical locations like Kerala, Odissa, West Bengal, Gujarat, Tamil Nadu etc.

## Indian White Shrimp Breeding and Culture Demonstration

### Salient points

- Indian white shrimp (*F. indicus*) is an indigenous species of having potential for culture.
- Suitable for extensive to intensive farming system.
- Amenable for high density culture with a production of 3-6 tons/ha.
- Compatible for polyculture with other fin fishes like mullets, milkfish and pearl spot and other Penaeid shrimps.
- Captive broodstock development and domestication of the species for SPF possible because of the shorter generation period.

### Optimum parameters and production performances

Salinity tolerance	: 5 to 45 ppt
Temperature tolerance	: 15°C to 32° C
Stocking density	: up to 60 no/ m <sup>2</sup>
Growth rate	: 1.2 to 2.5 g / week
Survival rate	: 70--90 %
Production level	: 3 to 6 tons/ha
FCR	: 1.2 to 1.6