



ICAR-CIBA - a nodal R&D agency working in brackishwater aquaculture for the past three decades with a vision of environmentally sustainable, economically viable and socially acceptable aquaculture technologies, system interventions, technology backstopping and policy inputs by the institute, contributing to economic benefits of the sector which has already recorded annual revenue of ₹ 30,000 crores.

## INDIAN WHITE SHRIMP (*Penaeus indicus*) FARMING TECHNOLOGY & PROPAGATION

Shrimp farming is the face of Indian brackishwater aquaculture which 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 recurrent outbreaks such as WSSV in farmed shrimp *P.monodon* lead to production loss of shrimp culture in India. This decline of shrimp production led to the introduction of alternative exotic SPF shrimp species, *Penaeus vannamei* (Pacific white shrimp) for commercial culture. In India rapid expansion of culture of *P. vannamei* in many parts of India without proper scientific management practices once again resulted in outbreak of many emerging diseases like running mortality syndrome, EMS, EHP, slow growth syndrome. In this backdrop the Indian white shrimp, an endemic to Indian coast is one of the alternative species that has undergone standardization of breeding and hatchery seed production and farming using formulated diet.



### The Technology

- ❖ Complete package of technology for year round seed production in industrial scale
- ❖ Existing shrimp hatcheries can be modified for disease free white shrimp seed production
- ❖ Modern disease diagnosis and screening protocols can be applied
- ❖ Package of farming practices for larval rearing, nursery and intensive farming
- ❖ Unique package of region specific rearing models such as polyculture with other fin fishes such as mullet, milkfish, pearl spot and other penaeid shrimps.
- ❖ Exclusive indigenous feed technology for all the life stages from larvae, starter grow-out and finisher.
- ❖ Cost effective grow-out feed technology using locally available ingredients.
- ❖ Captive broodstock development and domestication of the species for SPF stocks is in initial process.



## ICAR- CIBA Initiative on Multilocation Demonstration of *P.indicus*

- ❖ Excellent growth potential of 15g-20g ABW in 90-100 days of culture on par with other commercial penaeid species
- ❖ Density dependent growth pattern is observed in a period of 4 months
- ❖ 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 demand and pricing as other penaeid shrimp including Pacific white shrimp *P. vannamei*.



### Services offered

- ❖ Detailed project report including sourcing of Equipment, chemicals and reagents
- ❖ Training of technical personnel
- ❖ Transfer of technology on non-exclusive basis



### Sources

- ❖ Chennai institute to study white shrimps; <http://www.deccanchronicle.com/150916/nation-current-affairs/article/chennai-institute-study-white-shrimp>.

"Brackishwater aquaculture for food, employment and prosperity"

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