

## Shrimp Nursery Technologies

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World shrimp production from captive fisheries and farming activities reached over 4.2-million metric tons in 2002. This expansion has been primarily attributed to increased production from shrimp farming activities. Furthermore, in 2004, more than 41% (2.5 million tons) of the world's total shrimp production came from farming.

Although significant increase in shrimp production using intensive practices was noticed for the last decade, most of the industry expansion took place in semi-intensive systems. In most cases, incorporation of a shrimp nursery phase in the production cycle will improve the system's predictability. This phase is defined as the intermediate step between the early postlarval stage and the grow-out phase.

Use of a nursery phase in shrimp production practices provides several advantages over direct stocking of the PL in the grow-out ponds. Incorporating nursery phase can: 1. Improve shrimp survival, 2. Optimize facility utilization, 3. Provide better control over predators, water quality, shrimp growth and feeding efficiencies, and 4. Increase the number of the yearly crop productions. Furthermore, since during the nursery phase PL are kept in relatively small enclosures, often covered by greenhouse structures, a significant improvement in shrimp survival and yields in the grow-out phase have been reported in areas affected by WSSV.

This paper describes the intensive nursery system developed by the AgriLife Research Mariculture Laboratory, Corpus Christi, Texas for the Pacific White Shrimp, *Litopenaeus vannamei*. Results will be presented from small scale trials, commercial operations using these and other nursery practices with emphasis on biosecurity and sustainability issues.

Key words: Super intensive systems, Limited discharge, *Litopenaeus vannamei*