

The Natural Solution when only the best will do

Case Histories - Aquaculture

ch-a12.14

Water Quality Improvement in Shrimp Ponds © 2014

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ECOPROBIOTICS®, of the Bacta-Pur® System, are beneficial communities of natural bacteria, which have been on earth for millions of years and have been selected for their synergistic ability to biodegrade pollutants and to improve water quality. *ECOPROBIOTICS®* increase biodiversity. Just as people take probiotic yogurt for its' ability to assure the presence of the optimal community for digestion and immunity, *ECOPROBIOTICS®* improve ecosystem health. EVERY PRODUCTION of Bacta-Pur® products is analyzed and cleared for shipment ONLY after passing all performance tests and being CERTIFIED PATHOGEN FREE using techniques from the food industry. *ECOPROBIOTICS®* are purely natural and beneficial; they NEVER contain added chemicals such as surfactants, emulsifiers or enzymes...., nor do they contain genetically modified (GMO) or deliberately mutated organisms. *ECOPROBIOTICS®* are safe and beneficial. Bacta-Pur® microorganisms are not subject to TOSCA (USEPA) and are listed on the DSL of Environment Canada.

Background

Aquaculturists face a growing problem of decreasing water quality. Pollution causes negative feedback on yields and profits. Shrimp production, around the world, is decreasing because of habitat destruction due to over use of chemicals and rearing techniques not based on ecologically sound principles. The Bacta-Pur® System was developed as an ecological engineering tool to contribute to sustainable aquaculture and profitability.

Treatment Program

A 5-ha farm, in Viet Nam, (Fig. 1) raising *Litopenaeus (Penaeus) vannamei* employed an advanced cascading pond system equipped with AquaMats and bottom air diffusion aeration system. ECOPROBIOTICS® Bacta-Pur N3000 and Bacta-Pur® XLSW were added to the pond system, at a dose rate of 1 L each / hectare / week.

Results

Pristine water habitat was maintained at all time. The water remained clear and the shrimp looked healthy (Fig.1) Dead or moribund shrimp were rarely seen in the feed trays. The shrimp in the photos (Fig. 1) were from the nursery ponds, where they were held for the first five-weeks. Nursery stocking density was 1800 shrimp/m³. Even after 5 weeks of intensive feeding and with no water discharge or exchange, these ponds had zero sludge build up. Ammonia and algae were never problems during the entire 5 weeks. The shrimp maintained a voracious appetite (on Cargill shrimp feeds). From PL12 start, they reached average body lengths of around 5.5-5.8 cm, with several going over 6.5 cm in less than 4 weeks.

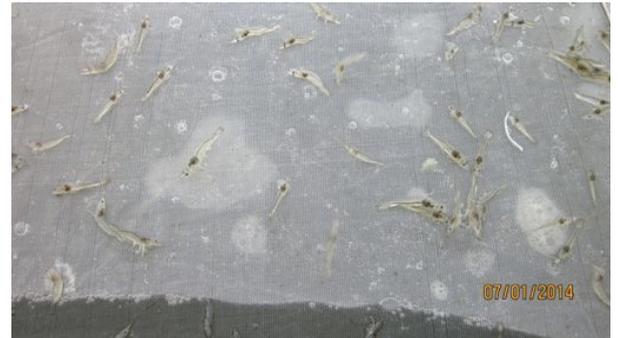


Figure 1. Shrimp production facility – the shrimp in the photos are from the nursery ponds, where they were held for the first five weeks.



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