



Supporting the Thai shrimp industry

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Since the last decade Thailand has been the world's leading shrimp exporter with annual foreign exchange earnings of more than US\$3 billion. In 2010, Thailand produced 600,000 tonnes of marine shrimp. The strong growth observed in the industry in the first decade of the century was mainly achieved by increasing the density of the farming process, resulting in higher yields.

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However Thai shrimp production has been on the decline in recent years. If most of the decline (10%) in 2011 was related to natural disasters like floods, the main culprit in 2012 has been the EMS/AHPND disease outbreak. This new disease resulted in massive mortalities at the early farming stage (15-30 days) and caused devastating economic damage to the sector. Production in 2013 plunged 54% from 2012 to just 250,000 tonnes.

EMS/AHPND caused widespread panic among Thai shrimp farmers and many did not even stock their ponds as they were afraid of losing their investment. Thai farmers quickly recognised that shrimp health management is strongly linked to other aspects of shrimp farming which

should be addressed in order to achieve effective shrimp health management. As such, farmers started focusing on maintaining a healthy environment in the ponds at all phases of the culture cycle so as to prevent problems in the ponds before they occur and reduce the likelihood of disease transmission outside the farms.

Emphasis has been placed on farming practices like the quality of post larvae, pond preparation and the improvement of water quality through disinfection, aeration, temperature control, pH, alkalinity and salinity. Farmers are also paying more attention to sludge reduction, reducing water exchange, removal of nitrogenous compounds, and the stability of the algae bloom. Feeding issues have also been managed in order to restrain the use of antibiotics through the application of probiotics.

Farmers are focusing on maintaining a healthy pond environment to prevent pond-related problems and reduce disease transmissions.

Working together



The use of probiotics became a successful tool to manage pond environments and the prophylactic control of pathogenic bacteria. The success of the aquaculture team in BIOMIN Thailand is based on improving shrimp farming practices.

Starting with only one sales person in 2010, the success of the products in the field led to a rapid expansion of the sales team that now accounts for four sales people and one technical person covering the major shrimp farming areas of the country.

Technical support

The BIOMIN Thailand sales team works actively with the farmers to improve pond environment and shrimp health with the application of probiotics (AquaStar®) and liver protection products (HEPAProtect-Aqua). Water quality parameters (pH, salinity, NH₃, NO₂) are analysed to assess the efficiency of product applications (AquaStar® Pond and PondZyme®) on improving pond conditions.



With regard to EMS/AHPND, BIOMIN has been developing and testing integrated strategies that minimise the presence of the vibrio in water (AquaStar®-probiotics) and feed (organic acids-Biotronic® Top3 and phytogenics-Biomin® P.E.P. MGE). Results so far have been promising with many customers reporting improvements in survival and good harvests (10-15 tonnes/ha) in areas affected by EMS/AHPND.

R&D



The BIOMIN R&D team supports the industry by looking at solutions to overcome the problem of EMS/AHPND. Several projects are now being conducted in our R&D centre in Austria, focussing on strategies to reduce or eliminate the agent that causes EMS/AHPND (*Vibrio parahaemolyticus*). These include studies evaluating substances that inhibit bacteria, reduce its virulence capacity (quorum quenching) and eliminate or reduce of the effects of the toxin.

Partners

BIOMIN also actively participates in major shrimp exhibitions and organises technical seminars with local farmers where our aqua experts explain the mode of actions of our products and discuss the latest issues regarding good farming techniques. Working together with the farmers for their success, we have been able to grow our business sustainably. 



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