

PHYTOPLANKTON COMMUNITY IN VANNAMEI SHRIMP (*Litopenaeus vannamei*) CULTIVATION IN INTENSIVE PONDS

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Abstract	<p>Optimal growth of shrimp and harvest in a pond is strongly influenced by water quality because this is a common thing but it cannot be denied that it is also an important thing. The combination of physicochemical parameters and biological indicators has become a classic way of studying water quality. Phytoplankton is a bioindicator that affects the productivity of vannamei shrimp in ponds. Currently, shrimp farming activities are intensive. This study was aimed to analyze the diversity and abundance of phytoplankton and water quality in vannamei shrimp ponds. The research objective was achieved by calculating the abundance, diversity index, evenness index, and plankton dominance index in ponds. The results of the study were that the phytoplankton of Chlorophyta with the highest total abundance in each pond was $18,400 \times 10^3$ individual/liter, $14,900 \times 10^3$ individual/liter, $16,620 \times 10^3$ individual/liter, and 6.410×10^3 individual/liter. The index of phytoplankton diversity at each location was 0.74, 0.73, 0.87, 0.74. Phytoplankton uniformity index at each location was 0.04, 0.04, 0.05, 0.05. Phytoplankton dominance index at each location was 0.60, 0.38, 0.56, 0.07. The abundance of phytoplankton is an obstacle to the success of vannamei shrimp aquaculture production.</p>
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