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Use of Greenwater Technology as Biocontrol of Luminous Bacteria in Intensive Shrimp (*Penaeus monodon*) Grow-out Culture

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ABSTRACT

The use of tilapia greenwater as biocontrol of luminous bacteria in intensive shrimp culture was evaluated. Analyses were made in ponds with tilapia pens, ponds that were supplied with tilapia green water from the reservoir and ponds without tilapia greenwater (control). Significantly lower levels of luminous bacteria and total *Vibrio* counts were obtained in ponds with greenwater taken from the reservoir. Only the control ponds experienced high shrimp mortality after 50 days. Significantly higher shrimp survival was obtained in treatments that used tilapia greenwater after 150 days of culture. Shrimp production averages ranged from 7,783 to 8,163 kg/ha and was not significantly different between treatments. Mean phytoplankton density was similar among treatments. Other physico-chemical parameters were within the optimum range for shrimp culture. Results show that tilapia greenwater, whether from the reservoir or in pens installed within the ponds, enhanced growth, survival, and production of shrimps as well as improved the resistance of shrimps against luminous vibriosis.
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