

**EVALUATION OF DIFFERENT CARBON SOURCES USED IN
THE BIOFLOC TECHNOLOGY (BFT) CULTURE
OF *Litopenaeus vannamei***

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ABSTRACT

Alaban, Leovigildo Rey S. University of the Philippines-Visayas, April 2011. Evaluation of different carbon sources used in the Biofloc technology (BFT) culture of *Litopenaeus vannamei*.

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An evaluation of different carbon sources used in Biofloc technology (BFT) culture of *L. vannamei* was done. The experiment included five treatments: Control, RB (Rice Bran), Tap (Tapioca), Mol (Molasses) and COMBI (Molasses + Rice Bran). Evaluation of biofloc parameters - Total Suspended Solids (TSS) and Settleable Solids (SS)- showed an increasing trend in treatments with molasses (Mol and COMBI) as the culture progressed. This became significantly different ($P < 0.05$) in the later phase of the culture. The evaluation of environmental parameters included TAN (Total Ammonia Nitrogen), $\text{NO}_2\text{-N}$ (Nitrite Nitrogen) and Chlorophyll α . In treatments with rice bran (RB and COMBI), TAN showed an increasing trend, becoming significantly different with the rest in the later phase of the culture ($P < 0.05$), while $\text{NO}_2\text{-N}$ were maintained below toxic levels. Chlorophyll α didn't show any discernable pattern. The effect on *L. vannamei* was evaluated based on growth (ABW-Average Body Weight, SGR-Specific Growth Rate and FCR- Feed Conversion Ratio) and yield (Survival and Biomass) parameters. Treatments with rice bran showed faster growth rates compared to the rest ($P < 0.05$) for most part of the culture period. However, analyses of growth parameters based on harvest data don't show any significant difference in SGR and final ABW for all treatments. Further, poor water quality in these treatments lead to heavy mortalities which caused FCR and Biomass to be significantly different ($P < 0.05$) from the rest of the treatments.

Key words: Biofloc Technology (BFT), Biofloc, Carbon Sources, *Litopenaeus vannamei*