Phytoplankton diversity and abundance in biofloc cultivation of African catfish with different stock density

Title	Phytoplankton diversity and abundance in biofloc cultivation of African catfish with different stock density
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Abstract	High fish stock density causes a decrease in water quality due to increased organic waste in water media and this can be overcame using biofloc technology. The bacterial consortium in the biofloc system breaks the organic compound into nutrients for phytoplankton growth. This research aims to determine phytoplankton abundance in biofloc ponds with different catfish stocking densities. Furthermore, a completely randomized design (CRD) was used, with four treatments and three replications. The treatments involved 1,000, 1,500, 2,000, and 2,500 catfish per m3, respectively, with a weight of Ã‚Â± 1-3 grams. Also, the fish was fed 3% of its body weight and reared for 40 days in a tarpaulin pond, with a water volume of Ã‚Â± 1,974 L. The AMOVA test was used to analyze the data and 10 phytoplankton genera were observed. However, the phytoplankton abundances showed no statistical significance among the treatments. The results showed that the first treatment had the most abundant phytoplankton, with an average number of 13,394 cell/L.Keywords:AbundanceBioflocCatfishDensityPhytoplankton
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