Composición y abundancia de comunidades microbianas asociadas al biofloc en un cultivo de tilapia [

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text (article)

Analítica

The goal of this study was to identify and estimate the abundance of microorganisms associated to biofloc culture system, developed from a `macrocosm-microcosm' system type. In first section (cylinder 1000 L), 75 juveniles tilapias were inoculated with 5.0 " 0.95 cm mean length and 4.2 " 1.08 g mean weight were placed. Daily, the fishes were fed with commercial diet, maintaining a C/N = 15:1 ratio, carbon (molasses and rice dust) and nitrogen (from commercial feed) supply was controlled. This culture condition was maintained during 14 weeks. Several microorganisms associated to the flocs were identified using conventional microbiological tests. To estimate the abundance of organisms associated to flocs, a stereoscopic and optical microscopes were used. Both microscopes were connected to an interphase program for images counting (Image ProPlus v.7.0). The results shown changes in abundance of different microorganisms communities associated to flocs during 14 weeks of experiment. The main groups found in flocs were: bacteria, algae, ciliates, rotifers and nematodes. The results confirm that the bioflocs contributes significantly as in situ natural food source, because a great number of organisms may be associated to them including heterotrophic microbial communities like genus Sphingomonas, Pseudomonas, Bacillus, Nitrospira, Nitrobacter and yeast Rhodotorula sp. The literature show that these microorganisms favoring water quality and physiological good health at organisms in culture
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