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ABSTRACT

The dynamics of microalgae population during piggery wastewater (PWW) treatment in four open photobioreactors operated at 27 days of hydraulic retention time, and inoculated with *Chlorella* sp. (R1), *Acutodesmus obliquus* (R2), *Oscillatoria* sp. (R3) and in the absence of inoculum (R4), were evaluated for 6 months. In addition, the algal-bacterial biomass concentration, removal of organic matter, nutrients and heavy metals were also assessed. The results revealed a high diversity and rapid variations in the structure of microalgae populations, *Chlorella* sp. being dominant in R4 throughout most of the operational period. Steady state average biomass concentration ranged from 2445-2610 mg/L in R1-R3 to 3265 mg/L in R4. No significant differences were recorded in the removal efficiencies (REs) of total organic carbon (86-87%), inorganic