

Quality and possible use of effluents from caiman farms

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Abstract: Caiman farms discard large volume of water and suspended solids (rest of food and feces). Those effluents most of the times are stocked in pools without any use. Our objective was to characterize chemical, physical and microbiological residual waters of those lagoons (both at surface and bottom). The effluent presented low content of dry matter and ashes at surface or bottom (0.13% on 0-60 cm and 0.17% on deeper than 60 cm), nutrients were low, pH slightly alkaline, and electric conductivity was a little bit lower than the critical value 2dS/m. Sodium (406.5 mg/L) and nitrogen (about 100 mg/L) were in high concentration, but phosphorus was very low (5.9 mg/L). Content of Ca, Mg, and K was 97.5, 25, and 107.5 mg/L, respectively, and increased with depth. Levels of BOD and COD indicated the water was slightly contaminated (20.6 mg O₂/L) and under levels of industrial effluents (24.8 mg O₂/L). Microbiological analysis did not register *Salmonella*, but *Escherichia coli* was present, also we found total anaerobics, and coliforms. Based on results a possible use is for agriculture, production of trees, or species used to feed livestock. For every option amount of pathogens must be determinate and if they exceed regulated values they should be reduced.

Keywords: Crocodilians breeding, Re-use; Residual water, Water quality

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