



Contribution ID : 8

Type : Poster

Bioremediation of African catfish (*Clarias gariepinus* (Burchell, 1822)) recirculating aquaculture system process water with duckweed *Lemna minor* L. (9440)

martedì 29 settembre 2026 17:35 (20)

The present study evaluated the suitability of recirculating aquaculture system (RAS) process water from African catfish (*Clarias gariepinus*) for cultivating *Lemna minor* (9440) in a greenhouse system. An indoor vertical farming (IVF) system for decoupled aquaponics was developed and implemented. Cultivation in process water had no significant effect on frond area or frond weight, while root length increased significantly. Nutrient and amino acid composition remained within ranges reported in the literature, with protein contents exceeding 32% in all treatments. Biomass productivity reached 3.0 g DW/m²/d in the control and 2.6 g DW/m²/d in both process water treatments. These results indicate that RAS process water is a suitable cultivation medium for *L. minor* (9440) without compromising biomass quality.

Corresponding author email

alexej.sonnenfeld@uni-rostock.de

Scientific Session

Applications

Keywords

aquaponics, IVF, RAS, Lemna, catfish

References

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Primary author(s) : Mr. SONNENFELD, Alexej (University of Rostock); Mr. BERCHTOLD, Erwin (University of Rostock)

Presenter(s) : Mr. SONNENFELD, Alexej (University of Rostock)

Session Classification : Poster Session I