

عنوان مقاله:

Research Article : Nutrient removal from rainbow trout juveniles in fish ponds using integrated biofilter duckweed (*Lemna minor*) and freshwater mussel (*Anodonta cygnea*)

محل انتشار:

مجله علوم شیلات ایران، دوره 23، شماره 3 (سال: 1403)

تعداد صفحات اصل مقاله: 18

نویسندگان:

M.H. Azhar – Universitas Airlangga

D. Memiş – Istanbul University

خلاصه مقاله:

A biological filter (biofilter) is a technique that aims to degrade nutrients that are wasted in water bodies by utilizing living organisms such as plants and shellfish. The study aims to determine the potential of duckweeds (*Lemna minor*)–freshwater mussel (*Anodonta cygnea*) integrated biofilters in utilizing nutrients from wastewater from rearing rainbow trout (*Oncorhynchus mykiss*) juveniles. This study used the initial weight of 25 ± 2.0 g of rainbow trout juveniles, freshwater mussels (*A. cygnea*) with an initial weight of 58 ± 2.0 g, and duckweeds (*L. minor*) with two different biomass weights (treatment 1 : 270 g and treatment 2 : 360 g) were used in the flow-through system. The water temperature was around 13–14°C during the experimental periods. Using duckweeds as a biofilter with two different stocking densities significantly affected ($p < 0.05$) the pH, DO, nitrate, and total phosphorus values in the treatment tanks. This study's results also revealed that using duckweed–freshwater mussels integrated biofilters could minimize the concentration of ammonium and total phosphorus in wastewater from rainbow trout juvenile rearing tanks.

کلمات کلیدی:

Lemna minor, *Anodonta cygnea*, *Oncorhynchus mykiss*, Living Biofilter, Aquaculture wastewater

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1970685>

