



“Gheorghe Asachi” Technical University of Iasi, Romania



WATER QUALITY OF SOME FISH PONDS FROM THE REPUBLIC OF MOLDOVA AND ROMANIA

Nina Bagrin^{1*}, Natalia Zubcov¹, Lucia Biletschi¹, Petru Ciorba¹, Liviu Dan Miron²

¹Institute of Zoology of the State University of Moldova, 1, Academiei Street, Chisinau, MD-2028, Republic of Moldova

²Ion Ionescu de la Brad Iasi University of Life Sciences, 3, Mihail Sadoveanu Alley, Iasi, 700490, Romania

Abstract

The study aimed to determine the chemical composition of water in six ponds from the Republic of Moldova (Falesti and Glodeni districts) and two ponds from eastern part of Romania (Iasi and Botosani counties) and to evaluate their water quality as one of the vital resources for an efficiency-oriented fish production and from an environmental perspective. Instantaneous samples were collected in April and July 2021 in Moldovan ponds and in May 2021 – in Romanian ones. It was revealed that the thermal regime of water, regime of oxygen, content of nutrients, main ions and mineralization were favourable for the growth of European carp and Asian cyprinids. In 38% of analysed samples water pH was equal or higher (≥ 9) than the maximum allowable value for summer fish ponds. CO_3^{2-} - HCO_3^- dominated among the anions and Na^+ + K^+ – among the cations in the water of Romanian ponds and two ponds from the Republic of Moldova. In other four ponds the dominance of SO_4^{2-} among anions and of Na^+ + K^+ – among cations was recorded. Increased mineralization of water in the studied Moldovan ponds (from 2.14 to 6.11 g/L, depending on the pond and sampling time) offers the opportunity to cultivate fish species that live in saline waters, for example, the pelengas mullet (*Mugil soiu*). Even the investigated ponds are located in areas with similar altitude and climate conditions, their water quality revealed high differences, the main factors being the type of water supply, presence or absence of water exchange and the applied management practices.

Key words: chemical oxygen demand, fish pond, mineralization, nutrients, pH

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* Author to whom all correspondence should be addressed: e-mail: nina.bagrin327@gmail.com; Phone: +370 22737509; Fax: +370 22737509