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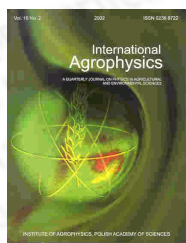
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abstract The aim of this paper was to study the process of phosphorus release from peat soils under flooded conditions and to specify the time and conditions in which this process takes place. Studies were conducted on samples of peat soils collected in the Łęczyńsko-Włodawskie Lake District, from high-moor peat and from low-moor peat. The peat soil samples (from depths of 0-20, 20-40 and 40-60 cm) was placed in plastic containers. 500 ml of water was added to each sample and the containers were tightly closed. The incubation was conducted in darkness for 126 days, at room temperature. The Eh and pH of peat soils were measured each week and filtrate was collected for determination of the P-PO₄³⁻ and Fe²⁺ concentrations. Phosphorus release was the highest in the surface layer (depth of 0-20 cm) of both sites in the high-moor and in the low-moor peat. The maximum phosphorus released (50.5 mg P-PO₄³⁻-dm⁻³) from low-moor peat was 7.5 times higher than the maximum phosphorus released from low-moor peat.

keywords high-moor peat, low-moor pet, phosphorus release

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