



## **Nutrient content in the bottom sediments of small midfield ponds**

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In water reservoirs, since the beginning of their existence, there takes place a process of sedimentation of different origin particles. The bottom sediments characterize with high sorptive properties and they are reservoirs of mineral and organic compounds. It was confirmed by the studies which were carried out in the years 2002-2004 in three midfield ponds located on the area of Leszno Lakeland (Wielkopolska). There were noted rather low concentration of the organic matter in sediments of two ponds (1.6 – 15.6%) and higher in one of them (it stated from 22.8% to 35.6% of dry mass). The percentage content of nitrogen and phosphorus in sediments dry mass was from 0.2 to 1.8% N and 0.04 – 0.65% P. Concentration of both analyzed nutrients were changed during the vegetation season. The highest they were in early spring. Content of nitrogen and phosphorus in bottom sediments decreased from March to May. It was because of intensive growth plants, which absorbed mineral nutrients and because of secretion them from sediments to the water.

The content of total nitrogen was from 1.77 to 17.84 g N/kg d.m. of sediments. In three ponds the average concentration of total nitrogen was 10.0; 3.9 i 3.6 g N/kg d.m, respectively. The content of phosphorus was from 0.4 to 6.5 g/kg.