Geophysical Research Abstracts
Vol. 12, EGU2010-3918, 2010
EGU General Assembly 2010

The xanthine oxidase activity in different of secondary transformed peat-moorsh soils

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The investigations were carried out on the transect of peatland 4.5 km long, located in the Agroecological Landscape Park host D. Chlapowski in Turew (40 km South-West of Poznań, West Polish Lowland). The sites investigation were located along Wyskoć ditch. The following material was taken from four chosen sites marked as Zbęchy, Bridge, Shelterbelt and Hirudo in two layers: acrotelm (0-50 cm) and catotelm (50-100 cm).

The object of this study was to characterize the biochemical properties by the determination of the xanthine oxidase activity in two layers (acrotelm and catotelm) of the four different peat-moorsh soils used as meadow.

The xanthine oxidase activity was determined spectrophotometrically by measuring uric acid formation at λ_{max}=290 nm with xanthine as substrate.

In peat-moorsh soil the highest activities of xanthine oxidasewas observed in the Shelterbelt and whereas the lowest - in Zbęchy, Bridge and Hirudo. Activities of this enzyme in peat-moorsh soil ranged from 5.96 to 19.51 μmol h^{-1}g d.m soil. Increased activities of xanthine oxidase have been recorded on the depth 50-100 cm - catotelm (from 11.71 to 19.51 μmol h^{-1}g d.m soil) in comparison with the depth 0-50 cm - acrotelm (from 5.96 to 14.64 μmol h^{-1}g d.m soil).

This work was supported by a grant No. N N305 3204 36 founded by Polish Ministry of Education.