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Deccesion of peat-moorsh soils under different land use

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Use of peatlands has a serious impact on soil properties as well as on loss of organic matter. On the basis of survey carried out in 1976, 1993 and 2001 in the Mrowla river valley near Rzeszow, authors analysed changes of the peat-moorsh soils under different land use. The 25- year period was analysed. Survey results comprised: loss of organic matter, advance of moorsh forming process and change of prognostic soil-moisture complexes (after Okruszko). Stratigraphic profiles made in the years1996-2001 were compared and rate of organic mass loss was calculated. The highest values were stated for ploughfields with crop rotation (root plants, industrial plants and cereals). Intensified soil aeration and moorsh forming process as well as wind erosion caused gradual lowering of ground level. Depth of degraded peat layer in roof of surveyed peat deposits was between 0,2 and 0,8 m. Ground surface was lowering of 1,68 cm per year. It was found that, for ploughfields especially, peat-moorhs soil showing medium degree of moorsh forming process (MtII) and prognostic soil-moisture complex BC (periodically drying), after 17 years already, had changed into a soil with high degree of moorsh forming process (MtIII) and prognostic soil-moisture complex C (drying). For meadows and pastures land used such evident change wasn't noticed. During the whole investigation period (25 years) mean lowering of the peat-moorsh soils level along transects lines for different land use was: 1,15 cm per year for meadows and pastures, 1,58 cm pea year for plougfields and 1,38 cm per year for alder wood.