

Abstract

This PhD thesis compares the water regime of reclaimed and unreclaimed spoil heaps after brown coal mining, with special regard to the development of hydrological properties of soils, which are determinant for the movement and retention of water in the soil.

The basic influence on the supply of soil water has the technology of pouring the spoil heaps and aging, which co-regulates the development of vegetation. During the development of soil's spoil heaps increases field water capacity and water retention, but also increases the wilting point. These changes are related to the accumulation of organic matter in the soil and the degradation of claystones to particle size of physical clay. The development of the ability of the spoil heaps soils to bind water is greater in reclaimed areas, where the upper organomineral horizon develops more rapidly, but there is also a wilting point and water consumption. On unreclaimed area, the soil substrate develops more slowly. Overall, the differences in water regime between reclaimed and unreclaimed areas are small.