ABSTRACT

Coal is the most important raw material mined in our country. The mining acitivity creates huge impact on the landscape. The aim of the thesis is to compare the attachment of spruces on spoil tips created by coal mining and their growth during spontaneous succession and reclamation. The studied non-recultivated areas are overgrown with spontaneous vegetation consisting mainly of willow (*Salix caprea*), white birch (*Betula pendula*) and aspen poplar (*Populus tremula L.).* The reclaimed area only consists of planted Norway spruce (*Picea abies*). The density of localities, age and height structure, layout on terrain waves and distance from the edge of the dump were studied. Spruces were also mapped using GPS. The density of spruce vegetation on reclaimed areas is significantly higher than on succession, however, their growth is slower. On non-reclaimed areas, the growth of already attached spruces is significantly faster than on reclaimed areas. The results show a higher attachment of spruces on the slopes of the waves, especially on the northern leeward side, rather than in the troughs or on the peaks. The results show the possibility of undercutting succession areas with climax trees as a promising method of reclamation.

Keywords: spruce, succession, reclamation, establishment of trees, density of trees