



Impact of subjacent rocks at the water and air regime of the depleted peat deposits

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At the depleted peat deposits (after peat extraction), where the residual layer of peat with the thickness of about 0,5 meters is laid at the well water permeable rocks, vegetation typical for dry conditions is developed in case of good drainage conditions; birch trees, willow, alder-trees and buckthorn prevail in this vegetation. Water and air regime is characterized here by good aeration with prevailing of oxidative processes. If water regime is regulated, these depleted peat areas are suitable for agricultural and forest lands; however, necessity of transformation of these depleted lands into forest and agricultural lands must be ecologically and economically justified.

If the residual layer of peat with the thickness of 0,05-0,3 m is based at the sapropel or peat sapropel, contrast amphibiotic water and air regime with strong fluctuation of oxidative and restoration process depending on the weather conditions is formed; this regime is formed without artificial increase of the ground waters level. This does not allow bog vegetation or vegetation typical for dry conditions to develop. Thus, within 20 and more years after completion of peat extraction, such areas are not covered by vegetation in spite of favorable agro-chemical qualities of peat layer and favorable for vegetation chemical composition of soil and ground waters.

Depleted peat deposits, that are based at the sapropel, are not suitable for agricultural use, because agricultural vegetation requires stable water and air regime with good aeration and oxidative and restoration potential within 400-750 mV. Contrast amphibiotic water and air regime of the depleted peat deposits that are based at sapropel excludes possibility to use them as agricultural lands.

Because of this reason, areas with residual peat layer that are based at sapropel are not suitable for forest planting. Due to periodic increase of ground waters level, rot systems of the plants can not penetrate into the required depth, and mechanical solidity of the residual low-powered peat layer does not facilitate formation of wind stable plants. Besides, due to the fact that this territory was formed at the place of former ancient lake, there is a possibility that this territory will be flooded during water full periods for long periods because columbine from the nearby territories and this will lead to the death of forest plants.

It is more profitable to use these areas for re-wetting or for creation of water basins.