

RESULTS OF MONITORING OF PERENNIAL GRASSES PRODUCTIVITY WITHIN THE MORaine HILL

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During the period of the ecological crisis the monitoring of crop yields becomes very important. Based on the results of such monitoring adaptive methods of land reclamation can be developed. The paper considers the results of a statistical analysis of monitoring data of the perennial grasses productivity. The studies have been carried out on an agroecological transect – a narrow field with a length of 1300 m, crossing all the main microlandscape positions of the moraine hill. The determination of the grass productivity has been carried out at the points of sampling, which differ only in the nature. They were regularly located along the transect at a distance of 40 m from one another. The investigations have been carried out in 1998–2016. The data of the meteorological station of Tver town have been used for the analysis of climatic parameters. The obtained data have been processed using the multiple regression method based on the STATGRAPHICS plus. The multiple regression equation describing the effect of long-term fluctuations of agrometeorological parameters on the yield of hay were obtained for the agricultural landscape as a whole and its individual parts. The regularities of adaptive reactions of plants to the variability of agroclimatic conditions within the finite-moraine ridges were revealed. It was found that agroclimatic conditions and landscape features of the territory have a significant impact on the grass production process. The negative impact of weather conditions on the grass of the first year is usually reflected in the yield of the grass in later years. The peculiarities of the redistribution of heat and moisture in different parts of the agrolandscape determine the dependence of grass yields from the level of waterlogging and inversion processes. It is recommended to conduct drainage within the finite-moraine hill, however, the systems of dual regulation of the air-water regime of soils should be applied at the upper elevations of the agrolandscape.

Key words: agrolandscape, land reclamation, crop, climate.