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SOME FEATURES OF THE SOIL COVER OF THE PROCESSED PEATLANDS IN THE CONDITIONS OF INTENSE FODDER PRODUCTION

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The paper presents the results of the soils fertility studies in anthropogenic soils formed as a result of industrial development of the Gadovskoye peat area with its subsequent agricultural development and use. Studies were conducted on several fields of the same fodder crop rotation at the developed peat area. A feature of the studied area is the proximity to the soil surface of underlying mineral rocks rich in calcium. As a result of a comprehensive survey of the experimental field soil plots, it was found that in the process of long-term agricultural use of land in fodder production, the peat reserves remaining after development were depleted. In some parts of the experimental plot, the mineral material of the swamp was exposed, while in its folds the thickness of the residual peat layer was more than one or two meters. During the site survey, a horizontal spatial soil variation was revealed and mapped, consisting in an uneven distribution of residual peat reserves over the territory. The soil sections laid in the experimental plot made it possible to demonstrate a significant scatter in the water-physical, agrophysical and agrochemical parameters of the soil within both the soil profile and the study area. Among the features of the studied area, a high content of bases in the soil profile, a shift in the exchangable acidity to the alkaline side, and a low content of mobile aluminum were noted. The work also established the negative effect of residual peat of different thickness on the process of temperature regime formation as of the soil surface and also of the surface air layer. The noted features of the experimental plot indicate that it is the most suitable object for the practical application of precision farming technologies.

Key words: developed peatlands, fodder production, soil variegation, agrophysical soil properties, agrochemical soil properties.