

IDENTIFICATION OF BARABA REGIONAL CLUSTERS (WESTERN SIBERIA) ON THE BASIS OF SOIL SPECTRA

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The regional differentiation of the geospatial structure of the soil cover of the Barabinsk plain (Western Siberia) was investigated. The values of the areas occupied by individual soil taxa and their undivided complexes are calculated in ArcGIS and Global Mapper environments on the basis of digital soil maps. The regional specificity of soil spectra, taken into account within the boundaries of six geomorphological regions of Baraba, is determined. The soil spectra of six regional clusters were analyzed, their differences in the composition of soil taxa, the values of taxonomic diversity, the levels of automorphic and hydromorphic soils, the degree of lakes development were established. Diagnostics of regional clusters of the Barabinsk lowered plain on signs of soil spectra is carried out. Thus, the West Barabinsk regional cluster is diagnosed by a set of leached chernozems, ordinary chernozems, ordinary saline chernozems and alluvial soils. The Central Barabinsk regional cluster differs from other clusters by a specific set of seven soil taxa with the participation of dark gray forest soils and southern saline chernozems. The chanovsky regional cluster is reliably identified by the presence of alkaline chernozems, ordinary chernozems and ordinary saline chernozems, without the participation of alluvial, dark gray forest and gray forest soils, ordinary solodized chernozems and southern saline chernozems. The East Barabinsk regional cluster is identified by a unique set of gray forest soils, gray forest gley soils, leached chernozems, ordinary solodized chernozems, ordinary saline chernozems. The northeastern Barabinsk regional cluster is characterized by both gray forest and gray forest gley soils. Vasyugan regional cluster is diagnosed with gray forest gley soils in the absence of gray forest. According to the selected diagnostic features, regional clusters can be combined into two territorial groups: West-Central-Barabinsk and Vasyugan-North-East-Barabinsk. The East Barabinsk regional cluster combines the diagnostic features of these two territorial groups. The first territorial group is characterized by an automorphic triad of leached chernozems, ordinary chernozems and ordinary saline chernozems, which should be considered as The Barabinsk diagnostic trend. Gray forest gley soils, which determine the influence of the Vasyugan diagnostic trend and are generally atypical for Baraba, act as a cross-cutting unifying diagnostic taxon of the second territorial group. Consequently, the taxonomic composition of automorphic soils determines the main differences in soil spectra of different regional clusters of Baraba. On the other hand, the taxonomic composition of hydromorphic soils forms a common foundation that unites the regional clusters of the Barabinsk plain into a unique natural complex.

Key words: soil spectra, taxonomic diversity, Western Siberia, Baraba, regional cluster, hydromorphic soils, automorphic soils.

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