

An aerodynamic approach in soil hydraulic conductivity estimation for investigating soil erosion degree

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Abstract We propose a new method for determining the degree of erosion for zonal soils of the East European Plain. This new approach uses soil porosity and filtration to determine a coefficient of aerodynamic similarity. We evaluated the degree of soil erosion on ranges of the major zonal soils of the eastern part of European Russia by applying this new method. Based on these data, we developed a diagnostic scale to determine the extent of soil erosion in this area.

Key words surface erosion; soils; filtration coefficient; porosity; diagnostic scales.