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Summary

One of the important geohazards processes, which take place now days is Ukraine, is the soil loses. Water erosion is one of the major threats to soils in the European Union, with a negative impact on ecosystem services, crop production, drinking water and carbon stocks. Magnetic method is low cost and rapid instrument for the soil erosion identification. The crucial idea of the present study is to find effective and low-cost method to assess soil processes and to minimize the risks related to the improper agriculture. The soil collected from the field under the concept of high-precision agriculture at the different areas was analysed to find relation between magnetic and agricultural parameters. The study site is located at the Forest-Steppe Ukraine agroclimatic zone. Magnetic parameters were measured for 80 samples. The magnetic susceptibility is in close relation with organic carbon and pH of soil. All these parameters are the components of the equations (RUSLE, WEPP) for the calculation the coefficient of the soil water erosion. The erosion processes within the slope are the initial basement of the formation more dangerous geohazards like local landslides

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