

DYNAMICS OF THE MAIN AGROCHEMICAL INDICATORS ON A CROPLAND WITH DIFFERENT SLOPES IN THE MOLDAVIAN SUB-CARPATHIANS

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Abstract

Assessment, protection and restoration of soil properties are the main directions to follow in farmland management, both for the long-term conservation of this natural resource and for increasing crop quality and yield. This study aimed to determine the soil agrochemical state and to estimate the variation of its main chemical properties induced by the irregular land surface. Agrochemical soil sampling was carried out at a depth of 0-25 cm in autumn 2022, the land was previously cultivated with oilseed rape. The specific soil of the area is phaeozem argic and the land parcel studied is tilled in conventional system. Soil reaction values, essential nutrients (N, P, K), and humus content were determined by standard methods. The results reveal a good to very good mobile potassium supply (132-308 ppm) and a low to medium mobile phosphorus content (9-22 ppm). The nitrogen index in relation to humus content (5.2%) reflected an average concentration of this element (3.6%). The pH values indicate a strong to moderate soil acidity response (4.7-5.2), caused by leaching of surface horizons by water erosion. By correlating the data obtained, it can be concluded that the soil fertility status is good and can be maintained and improved by applying appropriate tillage practices.

Key words: farmland, nutrients, potassium supply, fertility