
LAND QUALITY AND PRODUCTIVITY ASSESSMENT DATABASE CONCERNING THE AGRICULTURAL LAND OF ION NECULCE COMMUNE, IAȘI COUNTY

Oprea RADU¹, Cristian HUȚANU¹, Daniel CUREA², Oleg HORJAN³

e-mail:opricaradu@yahoo.com

Abstract

Agricultural land quality and productivity assessment relies both on soil fertility, which is undoubtedly the most important factor, and on climate, relief and hydrology factors. Soil quality is affected to a higher or lesser extent by one or more restrictions determined either by natural factors, or by agricultural and industrial anthropogenic actions, which may have a negative synergistic influence, the effect of which is a decrease in soil quality and even the abolition of its functions. This paper tackles the soil mapping surveys and the climate, relief and hydrology conditions in the Ion Neculce administrative-territorial unit, Iași County. From the climate point of view, the surveyed unit belongs to the temperate climate, with an average annual temperature of 9.5°C and average annual precipitations of 502 mm, which fall unevenly. The relief is mostly hilly, the biggest area of 6108 ha is located at altitudes ranging between 100 and 200 m, whereas 114 ha at altitudes ranging between 200 and 300 m. The water system is relatively dense and belongs to the Bahluiet river basin, a characteristic being the intermittent watercourses and the presence of temporary ponds in the depression areas. The productive capacity of the soil on the mapped area of 6338 ha is affected by surface erosion (53.35%), landslide (27.74%), gullies (1.12%), gleying (14.11%), stagnogleying (0.56%) and salinization and alkalization up to 26.25% of the surveyed area. The Ion Neculce Commune soils belong to the Chernisols (69.45%), Antrisoils (14.04%), Protisoils (9.91%), Luvisols (3.40%), Hydrisols (1.92%) and Salsodisols (1.28%) classes.

Keywords: agricultural land evaluation, gleying, stagnogleying, erosion, landslide
