

AGRICULTURAL LAND QUALITY IN MĂDÂRJAC COMMUNE, IAȘI COUNTY

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Abstract

Fertility is the most important soil characteristic and it is defined by the whole set of physical, chemical and biological features that provide plants their nutrients during the vegetation period. All lands enjoy natural fertility, which originates in the soil genesis process, as well as artificial fertility, which is the result of human intervention in the natural soil evolution consisting of agricultural improvement measures. Agricultural production is influenced by complex environmental factors (soil, climate, relief and hydrological) and by anthropic factors the involvement of which consists of the modification of some natural factors or of some features of the crop plants. Agricultural land quality is determined by assessment, according to which, in Romania, agricultural land belongs to five quality classes differentiated based on their assessment grades. The assessment study is conducted on various agricultural lands, which should be as homogeneous as possible from the viewpoint of their environmental factors and vegetation factors. In the analyzed land, we identified 27 simple soil units and 7 complex soil units, which were divided, depending on their slope and exposure, in 153 elementary land units, which were homogeneous as concerns all their characteristics (EHL). According to the assessment grades of various crops and uses obtained by the 153 ecologically homogeneous lands, we concluded that the charted land belongs to the 2nd, 3rd, 4th and 5th quality classes applied to arable land. The widest area of the 1369 charted hectares belongs to the 3rd quality class (37%), whereas 58% belongs to the 4th and 5th classes. Only 5% belongs to the 2nd class.

Key words: agricultural land quality assessment, ecologically homogeneous land, soil units