

RESEARCH ON NUTRIENT IMBALANCE CAUSED BY INAPPROPRIATE AGRICULTURAL PRACTICES AND HYDRIC EROSION ON HILLSIDE FARMLAND

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Abstract

Although the methods of tillage on hillside agricultural land and the disastrous effects of not respecting them are well known, it can be said that the human factor is still the main driving force behind surface erosion and pollution. The way in which tillage is carried out on such land produces a number of destructive effects that propagate over time both on soil quality, yields and the degree to which consumer demand is met. Thus, due to the movement of soil and water over the cultivated area, the nutrients already existent in the soil, as well as those allocated through fertilization, are unevenly distributed over the cultivated area, resulting in a disproportionate growth of cultivated plants, zones of deficiency and excess, and also a consumption of fertilizers that can lead to water pollution and reduce economic efficiency. The research was carried out on the farm of S.C. BERGOLO S.R.L, located in Cozmești, Vaslui County. To determine the macronutrient content of the soil, 6 average soil agrochemical samples were taken from 0-20 cm depth using the sampling equipment consisting of ATV HONDA 750 + WINTEX 1000 sampler auger. The results obtained indicate the values in which the soil reaction ranges, between 6.1 and 7.8, which indicates the presence of a slightly acidic to slightly alkaline soil reaction. The average value of the nitrogen index on the basis of which we determine the nitrogen supply to the soil is 3.3%. The results show that the accessible phosphorus content varies between 11-50 ppm (wide differences for the same plot), thus the degree of supply in the soil ranges from low to good. Potassium content ranges from 200 to 336 ppm, indicating good and very good soil supply. Humus is present in a percentage of 3.5%, indicating a medium content.

Key words: tillage, erosion, soil fertilization, macronutrients