

RESEARCHE ON SOIL FERTILITY IN A CALCAREOUS ALLUVIUM FROM THE PRUT RIVER VALLEY AND IN A CAMBIC CHERNOZEM LOCATED ON DOBREANA HILL, VASLUI COUNTY

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Abstract

Fertility is the fundamental ability of the soil to provide conditions for plant growth and development through the accumulation of vegetative factors (light, water, air, heat, nutrients and biological activity) and the assurance of conditions for these factors to be used in sufficient quantities. Spatial mapping of nitrogen, phosphorus and potassium in the soil is done to determine the nutrient supply status and to correlate this with the consumption requirements of the plants to be grown. The studied plots are part of 936 and 1856 land parcels, exploited by company AGROTUR S.R.L., which owns and works land both in the Prut river valley in the Lunca Veche area and on the Dobreana Hill, Vaslui County. In this scientific research, soil fertility is characterized using agrochemical (soil reaction and nutrients) and agrobiological (humus) indicators. Soil reaction (pH) is one of the most important properties of soil as a medium for plant growth, in the conducted research the pH is between 6.0 on 936 land parcel in Dobreana Hill and 7.9 on 1856 land parcel in the Prut river valley. The accessible nutrients supply is an indispensable factor for plant growth, according to the obtained results the studied plots are from low supply of mobile phosphorus in the case of cambic chernozem, to very good supply on the calcareous alluvial soil type of the Prut river valley and in the case of accessible potassium, both plots are very good supplied. The humus level is 3.1% on both land parcels, a value indicating a soil with an average humus content.

Key words: soil fertility, nutrients, soil reaction