STUDY OF THE MIBROBIOLOGICAL ACTIVITY VARIATION IN THE HAPLIC LUVISOL FROM CRISURILOR PLAIN

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Abstract. *Dynamics of biological activity of soil and seasonal variation of soil microorganisms may be the results of the changes occurring in soil chemistry. The chemical properties of soil influence the numerical presence of microorganisms. This paper presents the dependence between numerical variations of microorganism populations and chemical properties of haplic luvisol. The research was done in 2010 and 2011 on three soil variant such as: agricultural haplic luvisol, apricot haplic luvisol and paddock haplic luvisol. Total number of soil microorganisms, Actinomycetes, yeast-mold, Azotobacter and nitrifying bacteria was determined using the dilution method.*

Key words: seasonal variations, soil microorganisms, chemical properties

1.Introduction

The soil represents a favourable habitat for microorganisms and is inhabited by a wide range of microorganisms, including bacteria, fungi, algae, viruses and protozoa. Microorganisms are found in large numbers in soil - usually between one and ten million microorganisms are present per gram of soil - with bacteria and fungi being the most prevalent. [6]

Soil microorganisms are very important as almost every chemical transformation taking place in soil involves active contributions from soil micro-organisms. In particular, they play an active role in soil fertility as a result of their involvement in the cycle of nutrients like carbon and nitrogen, which are required for plant growth. For example, soil microorganisms are responsible for the decomposition of the organic matter entering the soil and therefore in the recycling of nutrients in soil. [7]

Certain soil microorganisms such as mycorrhizal fungi can also increase the availability of mineral nutrients (phosphorus) to plants. Other soil microorganisms can increase the amount of nutrients present in the soil. For instance, nitrogen-fixing bacteria can transform nitrogen gas present in the soil atmosphere into soluble nitrogenous compounds that plant roots can utilise for growth. These microorganisms, which improve the fertility status of the soil and contribute to

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