

INFLUENCE OF SLOPE ASPECT ON THE SOIL MACRONUTRIENTS ON THE MOLDAVIAN PLAIN

**Tudor George AOSTĂCIOAEI¹, Sorin CĂPȘUNĂ¹, Manuela FILIP¹, Denis ȚOPA¹,
Gerard JITĂREANU¹**

e-mail: aos.tudor@yahoo.ro

Abstract

Current trends are increasingly based on the adoption of sustainable agriculture, through the implementation of farming practices designed to protect the environment and at the same time ensure the food needs of a growing population. The rational application of fertilizers and liming materials in agriculture is one of the most important practical technological actions that efficiently exploit the roles of fertilizing elements and substances in crops. In the current concept, the application of chemical and organic fertilizers must be done with discernment, depending on the specific local soil conditions, its nutrient supply, the nutrient requirements of the plants and the expected yields. The benefits of nutrients in chemical fertilizers are evidenced by their quantitative participation in biomass production and their specific roles in essential plant metabolic processes. The researches were conducted in the lands managed by S.C. FARMBĂLȚAȚI S.R.L., located on the territory of Balțați commune, Iasi County. In order to determine the state of soil supply in macronutrients accessible to plants, 4 average agrochemical samples were taken from the depth range 0-20 cm using the equipment consisting of ATV HONDA 750 + auger sampler WINTEX 1000. The results obtained identifies the range of variation of the soil reaction, i.e. pH 6.9-8.0, resulting in a neutral to slightly alkaline soil reaction. The nitrogen index value on which we evaluate the nitrogen supply status of soils ranging between 1.4–3.9%. The accessible phosphorus content varies between 16-29 ppm, so the level of phosphorus in soil is low to medium, and the available potassium content has values between 247-299 ppm, indicating that the soils are very good provided with potassium. The highest value of humus content is 3.9%, indicating a medium content.

Key words: soil fertilization, sunflower, slope of land, macronutrients