The Agrochemical Evolution of the Typical Preluvosoil Through Differentiated Fertilization on the Apple in the Reghin Area

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SUMMARY

The cultivated apple represents the fruit-tree species that occupies one of the first places as production in world fruit-tree growing, due to the paramount part that they play for human nutrition, both as fresh fruit and different processed products.

Regarding the spread of the apple in the world and our country, statistic data show that this tree species occupies the first place among cultivated species in temperate climate. Our country’s soil and climate provide most favourable conditions for apple-tree cultivation, thus achieving superior qualitative and quantitative productions, while maintaining an optimum agrochemical nutritive framework for plants.

The soils, typical preluvosoil ones, specific to the area show a varied structure in terms of origin, mineralogic composition, texture, rich in CaCO₃ (loess, loess deposits, limestone, clay, loam, silt). Fertility-wise, these soils are considered to have good natural fertility for most plants. The paper relies on rigorous experiments in a classical apple-tree plantation on a typical preluvosoil (brown argiloluvial one) in the Reghin area, with differentiated fertilization systems, both mineral and organic, for Golden Delicious and Starkrimson. The typical preluvosoil under experiment presents the characteristics of the class and pedologic type. In this case, the dealkalinization and acidification process are typical and accompany the leaching of loam and alkali to the horizons at the middle of the soil profile.

Differentiated fertilization of the typical preluvosoil in Reghin significant modifications of the main agrochemical soil indices that exert a positive influence on the soil’s fertility and productivity. In the case of some indicators, this occurs on a sustainable term, such as the N, P and K supply. The systematic control and management of these indicators of soil fertility towards normal domains provide an agrochemical optimization of the soil-plant system in time, according to the soil specificity and the specific annual global consumption need of the apple for superior qualitative and quantitative productions, without damaging the environment.

Key words: soil, fertilization, agrochemical indices, apples

REFERENCES