THE EFFECT OF SELECTED SOIL FEATURES ON LEACHING OF SOLUBLE FORMS MINERAL ELEMENTS TO SHALLOW GROUND WATERS

Key words: 0.01 M CaCl$_2$ soil extract, dissolved organic carbon (DOC), meadow soil, shallow ground waters, soluble forms of macro- and micronutrients

SUMMARY

The study consisted in estimating the effect of soil features such as pH and dissolved organic carbon (DOC) content in 0.01 M CaCl$_2$ soil extract on leaching of soluble forms of mineral elements to shallow ground waters. In the years 2001-2005 monthly soil samples were taken from soil layers: 0-10 and 10-20 cm and shallow ground waters were taken from control wells situated in buffer strips of the long-term meadow experiments in Janki, Laszczki, Falenty and Baniocha in Masovian Province. Positive statistically significant correlations of Spearman between pH$_{CaCl_2}$ and the concentration of macro- and micronutrients in shallow ground waters were found for P, Mg and negative correlations for Mn and Zn. Negative statistically significant were also found between the content of DOC and concentration of these elements in shallow ground waters.

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